

# CORPORATION FINANCE

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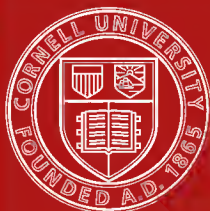
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## **By the Author of This Volume**

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### **CORPORATION FINANCE**

College textbook based on the author's "Financial Policy of Corporations."

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### **THE FINANCIAL POLICY OF CORPORATIONS**

Exhaustive treatment of financial structure and problems.  
Covers railroads, utilities, and industrials.

1920 (2nd printing, 1921). 5 vols. 953 pages. \$12.50

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# CORPORATION FINANCE

A TEXTBOOK FOR COLLEGES AND SCHOOLS  
OF BUSINESS ADMINISTRATION

By

ARTHUR STONE DEWING, PH.D.

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University; author of "The Financial  
Policy of Corporations"

Assisted by

FRANCES R. DEWING, PH.D.



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## PREFACE

Teachers of economics and corporation finance have expressed a wish to have a book covering the leading features of corporation finance available for classroom instruction—a book that can be read easily by students during a single semester.

A clear purpose and method must be in mind in the preparation and use of a textbook in one of the social sciences. Sound pedagogy requires that tendencies and expedients be reduced to the form of definite generalizations devoid of limitations and exceptions. In actual practice the limitations and exceptions are glaringly evident; but to notice them, even in passing, would confuse the pupil and create in his mind the impression that the whole subject is a mass of unrelated and unorganized cases. The present work, accordingly, is to be regarded as a summary of the commonly accepted working principles of corporation finance, without the inclusion of either much concrete illustration on the one hand or exceptions on the other. It is suggested that teachers, by lectures or supplementary reading, and by specific problems supply the necessary illustrations. These should be chosen from cases familiar to the student so that the whole subject may be given a reality and a vitality that cannot be obtained from the printed page alone. Teachers will find it profitable to make liberal use of the problems to be found at the end of the book. The case method of teaching the social sciences has passed beyond the experimental stage.

Perhaps this study may be of service also to the general reader. We are living in the day and generation of the corporation. The ease of communication has revolutionized the methods of the conduct of business—and interwoven in these changes is the corporation both as cause and effect.

It has a basis in our general theory of economics and in practical business. But these are not divorced and separate. In the preface to the author's larger work, "The Financial Policy of Corporations," on which this book is based, it has been pointed out that there is no opposition between the theory and the practice of sound finance. As in all other phases of social activity good practice is based on sound theory and sound theory has its constant pragmatic justification in successful practice.

ARTHUR S. DEWING

Cambridge, Massachusetts,  
June 12, 1922.

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# CORPORATION FINANCE

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## CHAPTER I

### THE CORPORATION AND ITS FINANCIAL STRUCTURE

**Origin and Development.**—Historically the corporation began centuries ago under Roman law. Yet the modern business corporation is so much more complicated in its structure and so much further developed that it may well be considered one of the inventions of modern times. It owes its development to the necessity of organizing capital and management ability so as to exploit the physical changes in industry resulting from the use of steam and machinery.

**Simple Financial Structures.**—From the point of view of financial structure, there are a great variety of business corporations. Simplest of all, there is the corporation with the ownership of its property divided into a certain number of equal parts. These parts are called "shares," and each share is given a nominal value, the sum total of which should correspond to the entire property values of the corporation at the time of its organization. This nominal value is called the "par value," and the sum total of the par value of all the shares is called the "capitalization" of the corporation.

The financial plan of the Walter Baker Company is a good illustration of this simple plan of organization. The owners and managers of this corporation created 89,000 shares of units of equal ownership. Some persons hold only one

of the "ownerships" or shares, others hold many ; but altogether and in the aggregate they represent the ownership of the entire property of the chocolate factory, the good-will of the company, its trade-marks and trade-names—in fact, all that it possesses. The company has no debts, other than its day-to-day debts for cocoa beans, sugar, labor, and similar items, so that there are no creditors who have any claims to the property. In brief, the entire property of the corporation is owned by its shareholders in proportion to the number of shares held by each.

Somewhat more intricate and yet simple, compared with the financial plans of the majority of our large corporate enterprises, are the capitalization figures of the American Sugar Refining Company. It has outstanding 1,800,000 shares of stock, all considered to have a par value of \$100 each. But of these shares one-half, or 900,000, were sold to the public with the express understanding that the company would pay dividends on them at the rate of \$7 a year before anything should be paid on the other 900,000 shares. Such a division of the capital stock into preferred shares and common shares is very common among corporations that have come into existence within the last fifty years, but is rare among the old English and American corporations.

**Intricate Financial Structures.**—A step further in the intricate financial structures of American corporations is shown by the various issues of stocks and bonds of the American Agricultural Chemical Company—the fertilizer "trust." It has 333,221 shares of common stock and 284,552 shares of preferred stock entitled to prior dividends of \$6 each per year. But besides this share capital the company has three issues of bonds outstanding representing three different grades, that is, three different claims to the property and the earnings of the corporation. There is an issue of \$6,616,000 first mortgage

bonds which have a first or prior claim to the property of the company, the interest on which must be paid in preference to the interest on any other bonds and before any profits are divided among the stockholders. Following this, there is an issue of \$30,000,000 second mortgage bonds, and finally an issue of \$5,000,000 notes originally issued for ten years. In all, therefore, there are five different gradations or strata in the financial plan of the American Agricultural Chemical Company—three of bonds and two of stocks.

On the whole, probably, the most intricate financial plans are to be found among the great trunk line railroad corporations. The great variety of stocks and bonds embraced in the New York Central system is a case in point. Besides the stock and no less than 60 separate issues of bonds of the main or parent corporation, there are over 20 subordinate corporations, all of the stock or at least a majority of the stock of which is owned by the main railroad corporations. These subordinate corporations have many bond issues representing many different liens on the separate parts of the system and the claims to the earnings of these parts. The intricate interrelation of all these parts presents a highly complex situation. It is, in fact, a kind of corporation puzzle.

**Personal Liability of Partners.**—The origin of the modern business corporation held the germ of all these later intricate developments. The part-ownership, which in the earlier days of smaller financial operations sowed the seeds, involved all concerned, even the silent partners, in the full risks of the enterprise. Such risks, however, men are not willing to assume except when they have such personal knowledge or associations that their confidence in the managing partners is very great. Should the enterprise meet with disaster, all who owned it would be responsible for its debts, even to the measure of all they possessed. When the development of the material in-

vention of the century called for large enterprises, these needed more capital than any group of men could get together on such a purely personal basis. The idea of the modern business corporation developed in order to avoid the personal liability involved in all partnership.

**Nature of the Corporation—Limited Liability.**—A modern corporation is a certain definite amount of capital and capital assets, managed according to a defined scheme for the selection of officers and the distribution of profits. It can enter into contracts, sue, and be sued. The other personal property of the officers and the profit-receivers, the stockholders, is, except in case of fraud, entirely safeguarded against any claims from creditors of the corporation beyond the very exact statements of the limits of these claims given in what is called the "articles of incorporation." A multifarious diversity in the articles of incorporation has developed out of this original idea of limited liability.

We cannot say that a corporation is the group of its owners, for it has an existence apart from them. As certain of the older corporations have developed working organizations, society has come to feel, too, a kind of individualizing quality about them which is independent of the particular men in control, although it expresses, as a kind of composite picture, the financial policy of the officers past and present who have developed it. "Standard Oil" means one kind of business policy today; "United States Steel" means another. The closest analogy is found in the traditions holding on from generation to generation in colleges, themselves corporations of another sort.

**Corporate Management.**—There is not much variation in the form of management except on the question of who elects the officers. A board of directors chosen from the

stockholders, who are theoretically the people interested in the success of the company, makes all important appointments and decisions as to policy. Most of these serve without further pay than a slight fee for their time on days of board meetings. Some one or two among them, probably a president and treasurer, take detailed charge of running the affairs of the company and receive adequate salaries. The other managers are salaried officials chosen by the directors.

**Wide Distribution of Investments.**—With the definitions of liabilities and rights accruing to different kinds of securities clearly before them, the public at large has been able to make a choice of investments for its savings on an impersonal basis, from published reports and bankers' estimates of the promise of different concerns. This means a wider range of possibilities for investments for any one person. Corporations have further encouraged a wide distribution of investments by selling securities in small amounts. Even bonds, railroad, and industrial as well as government bonds, originally of at least \$1,000 par value are now divided into \$100 and \$50 units. As a result, corporation officials look to the great mass of people with small savings to invest, more than to millionaires, to supply the backbone of capital. The wide distribution of securities has led to a wide distribution of ownership which makes the conduct and welfare of many of the larger well-known corporations, such as United States Steel, American Telephone and Telegraph, the Pennsylvania and the New York Central railroads, matters of public concern. This public stockholders' interest is quite independent of the enormous significance of these great corporations in the industrial life of the country. Even before the present widespread demand for the general publicity of the accounts and of the business policy of corporations, some companies, such as the New England cotton mills and United States Steel Company, saw



the advantages of taking the public into their confidence as a kind of advertisement of their securities.

**Scope of Corporation Finance.**—Corporation finance deals with the financial problems of corporate enterprises—particularly those of sufficient size and importance to solicit public investment in their securities. It deals with the financial aspects of the promotion of new enterprises and with the administration of them during the period of infancy. It deals with various accounting problems connected with the distinction between capital and income and the various administration questions of policy growing out of a developing and expanding business. Again it is concerned with corporate failure—the financial adjustments resulting from bolstering up or even rehabilitating a bankrupt enterprise. These and similar topics will be discussed in the succeeding chapters.

## CHAPTER II

### COMMON STOCK

**Appeal to Investment Motives.**—The necessity which led to the invention of the corporation as a legal and business entity with a life independent of its owners led also to the development of its more complicated forms. The most pressing problem for the management of any corporation is again and again the problem of obtaining such capital as it needs for an efficient plant and efficient methods of conducting the business. This usually resolves itself into the question of persuading the outside investor to entrust his savings to the care and management of the corporation directors; in technical words, it is the question of making an investment in the securities of the company attractive. Two motives are present in each investor's mind—the desire for assured yearly return, and the desire to preserve the safety of the principal. The great varieties of different types of preferred stocks and bonds are the outcome of attempts to appeal first to one and then to another of the motives, or of attempts to appeal to both at once.

**Early Use of Common and Preferred Stocks.**—In the historical development of the complicated corporation structure, stock giving direct claim on actual property came earliest. The first sections of the early railroads of the Atlantic seaboard were built entirely by stock subscription, just as the New England cotton mills are now built. This custom prevailed down to 1840. However, it was often found that more money was required to finish and extend the early sections of the road than had been anticipated, and the stock-

holders, not wishing to increase their subscriptions, consented to the use of the railroad already built as a basis for loans. As a result bonds were issued—sometimes secured by a mortgage and sometimes without any specific security.

The use of preferred stocks rather than bonds rose where outside considerations entered in, such as the fact that a given state taxes bonds and does not tax stocks, or that manufacturing plants must be kept free of mortgages so that this credit is free to carry the obligations incurred in the purchase of raw materials. As soon as corporations found that a market among investors existed for these preferred stocks, they were issued with steadily increasing frequency.

**Difference Between Stocks and Bonds.**—The difference between stocks and bonds is fundamental from the point of view of economic theory. All stock stands, theoretically, for part ownerships; and the risks of loss or gain belong appropriately to it. All bonds, on the other hand, represent loans and have fixed interest rates. The holders of bonds are creditors and their claims upon the assets of the corporation at time of liquidation take precedence over those of the stockholders. From the point of view of the conduct of the business, too, there is a sharp demarcation between them. Failure to pay interest rates on bonds opens the way to bankruptcy or the appointment of receivers. Failure to pay dividends on stock has no effect on the legal status of the company. Interest payments of the first sort are called “fixed charges”; they are a burden not to be shifted to the future, nor in any way modified. Dividends on stocks are merely divisions of the profits, if such exist.

**The Import of Capital Stock.**—Capital stock, common stock, or merely stock, represents invariably the interests of the proprietors in the corporate enterprise. In no sense can stock

represent an outside claim; in no sense can the stockholder regard himself as a creditor. The fundamental idea of stock is that it represents the proportionate contribution to the original capital or property of the corporation. Stock is the share of the ownership, the share of responsibility of management, and the share of profit or loss. So far as the complexity of modern business permits, the stockholder is the business partner of the old-fashioned partnership, but lacking certain of the legal implications attending the position of partner. The import of capital stock, then, is that it shall stand for the representative values of the proprietary interests; representative values which may or may not include the entire assets or actual capital of the corporation.

On page 10 is an example of a stock certificate.

**Types of Capital Stock.**—There are two types of capital stock, unlike in the extent of the rights which the ownership implied involves. One type of capital or common stock stands for the entire capital of the business. The stockholders own everything. There are no preferred shareholders, no bondholders, no short-term noteholders. The Walter Baker Company, cited in the preceding chapter, was of this type. The other type represents merely the margin of assets and earnings after the claims of a host of preferred stocks, bonds, and notes have been satisfied. The American Agricultural Chemical Company, and the New York Central Railroad, described in the preceding chapter, were of this type. From every point of view, except that of legal status, these two types of common capital stock must be carefully distinguished.

The simpler form of corporation with its single class of capital stock was developed logically and historically out of the partnership. Capital stock of that first type, representing the entire business, was therefore prior in point of time as well as first from the standpoint of simplicity. Common

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THE NEW YORK CENTRAL AND HUDSON RIVER  
RAILROAD COMPANY

CERTIFICATE FOR LESS THAN ONE HUNDRED SHARES

Countersigned this . . . 10th . . . day of . . . Sept. . . . 1910 . . .  
One . . . . . Share  
Union Trust Company of New York, Register of Transfers  
By . . . A. W. Kelley . . . Vice-President (Seal)

*John R. Jones* . . . . . *New York, N. Y.* . . . . . is  
entitled to *One* . . . . . (*1*) . . . . . Shares  
of One hundred dollars each of the Capital Stock of the New York Central and Hudson River  
Rail Road Company transferable in person or by Attorney on the Books of the Company only  
on the surrender and cancellation of this Certificate by an endorsement thereof hereon and in  
the form and manner which may at the time be required by the transfer regulations of the  
Company.

This Certificate is however to be of no effect or validity until countersigned by the  
Registrar of Transfers of said Company in the City of New York.

In witness whereof the President and Treasurer of the said Company have hereunto sub-  
scribed their names at the City of Albany this . . . 10th . . . day of . . . Sept. . . . in the  
year *One thousand nine hundred and ten.*

. . . . . *John R. Stanton* . . . . . Treasurer . . . . . *James A. Smith* . . . . . Vice-President



stocks are now of the first group—representing rights to the entire property—restricted to a few small railroads, the majority of Massachusetts electric light and gas companies, most small and medium-sized cotton mills, locally owned manufacturing companies, banks, insurance companies, and mines. There have been in almost every case some special reasons tending to hold back these types of industry from developing the more elaborate form of capitalization. Until recently the tax laws in Massachusetts levied a general property tax on bonds, but not on stocks, so that gas, electric light, and even cotton mills, found a readier sale for their tax-exempt stocks among local capitalists. Small manufacturing companies everywhere find the banks reluctant to extend credit to bonded plants; banks and insurance companies are prevented by law from altering the form of their original stock issues; mines find it impossible to sell bonds. Investors in any of these stocks are the actual owners of the business, subject only to the claims of the holders of floating debt and the merchandise creditors.

**Shares in Associations.**—Analogous to the common stocks of corporations possessing the entire rights to the corporate property are the shares in associations, shares in trusts, and certificates of part ownership. Except in the legal obligations taken by their owners, which are analogous to those of partners, these anomalies are common stocks in all but name. The certificates in associations are, in truth, certificates of partnership. Owing to the unlimited liability that attaches itself to such partnership interests, these certificates of associations are not in use anywhere in the United States, except in the case of the large express companies and certain small New England businesses which have maintained a kind of localized partnership character for the last fifty or more years. The Adams and American Express Companies stocks are the only remaining

partnership shares widely held by the public. These partnerships were formed some fifty years ago—by means of “articles of association” under which the original associates and their successors agreed to engage in the express business. The management was restricted to a small group of officials which organized and maintained itself independently of the great body of certificate-holders or partners. In this manner the management of the association was independent of all regulation either from within or without, and it was not until the federal government, by the constitutional authority of the “commerce between the states” provision, placed the express companies under the Interstate Commerce Commission that any control was exercised over the conduct of their business. This power of the management to conduct the affairs of the express companies without financial responsibility to the shareholders has worked greatly to the latter’s disadvantage.

On page 13 is shown a stock certificate of the American Express Company.

**Massachusetts Trusts.**—Shares of trust, or business associations, survive only in Massachusetts. Historically they owe their origin to the fact that corporations cannot hold real estate for investment (mortmain). Title to property, accordingly, is taken by a group of trustees who issue their certificates of equitable interest in the trust property. The trustees derive their authority from trust agreements or articles of association, which describe in detail their powers, rights, and exemptions, together with those of the certificate-holders. When the trust form of organization was driven out of other states it remained in Massachusetts because, sanctioned by a century of usage, a large amount of property had passed under the trust organization and the persons most concerned exercised a strong influence on the course of legislation.

180,000

THIS CERTIFIES THAT

Shares

.... John R. Jones ....

Share in the  
is entitled to .... One ....

AMERICAN EXPRESS COMPANY

No. 51630

I share

organized under Articles of Association dated November 25th, 1868, in which it is among other things provided

THAT the term of the existence of said Company shall be thirty years and after the first day of December 1898.

THAT the shares shall be transferable on the Books of the Company only in person or by Attorney upon surrender of the script representing the same and the payment of all calls and assessments unpaid thereon.

THAT such transfer is not matter of right but is permitted by the Company in case the Board of Directors shall not elect to purchase said shares for the benefit of the Company at the market value thereof.

THAT the shares are subject to assessment for all losses and damages and other liabilities incurred in the prosecution of the business of the Company. THAT the receipt of this certificate constitutes the person receiving the same from the date thereof a member of said Company, entitled to all benefits and subject to all the liabilities of a shareholder therein as fully as signing said Articles of Association would do.

IN WITNESS WHEREOF, the said Company have caused this Certificate to be signed by their President and Secretary and countersigned by the Treasurer at the Office of the Company in the City of New York, this *twenty-fourth* day of *April*, 1912.

..... *John A. Thompson* .... Secretary

..... *James A. Bell* .... President

Countersigned  
by

.....*Thomas Roe*..... Treasurer

SHARES \$100 EACH

This Certificate not valid unless Countersigned  
Apr. 24, 1912 by the Farmers Loan and Trust  
Company, Registrars  
by ... John R. Sampson .... Registrar

**Par Value.**—Capital stock, whether of the type that represents all the assets of the corporation or the type that represents merely the residual equity after all other claims have been satisfied, involves two distinct ideas—a participation in the rights of ownership, and a valuation of this participation. This latter is the par value. It is the less important. The stockholder can never collect, like the bondholder, the par value of his security from the corporation. Even though paid for in full and representing for a short time the full and actual value, the equality passes with the first business transaction, for the value of the property behind the shares changes with every step in the success or failure of the corporation, as new property is added or old property lost or dissipated. The essential character of capital stock that remains permanent, whatsoever the fortunes of the actual capital, is that it stands for a definite proportion of the corporate property and earnings. This involves no par value. The purpose of stock would therefore be fully accomplished if the shares were merely proportionate parts of a total—in other words, shares without par value.

**Shares Without Par Value.**—There would be, aside from doing away with the meaninglessness of “par value,” certain specific advantages. The most conspicuous is that of truthfulness. Without par value there is no pretense that the actual property of the corporation is equivalent to the par value of its shares after the liabilities are met, and there is no insinuation of overcapitalization or undercapitalization. In other words, the capital stock would stand merely for proportionate shares in the earnings of the corporation, and, if the corporation be liquidated, the proportionate shares in the equity remaining after all other claims had been satisfied. Another cardinal advantage would be that of forcing the prospective investor to examine the real value of stock, and not be deluded into think-

ing that there is some necessary connection between the par value and the real intrinsic value.

A clear statement of this advantage of truthfulness is to be found in the report of the Railroad Securities Commission, appointed by President Taft.

We do not believe that the retention of the hundred-dollar mark, or any other dollar mark, upon the face of the share of stock, is of essential importance. We are ready to recommend that the law should encourage the creation of companies whose shares have no par value, and permit existing companies to change their stock into shares without par value whenever their convenience requires it. . . . As between the two alternatives of permitting the issue of stock below par, or authorizing the creation of shares without par value, the latter seems to this Commission the preferable one. . . . It is less in accord with existing business habits and usages; but it has the cardinal merit of accuracy. It makes no claims that the share thus issued is anything more than a participation certificate.

At the present time, January, 1922, the corporate laws of twenty-two states permit the organization of corporations with no par value to their shares. This represents quite a remarkable change of public sentiment when it is remembered that the first no-par-value law was passed in 1912 by New York.

**Full-Paid Capital Stock.**—Capital stock is usually, although not always, full paid. In other words, the corporation subscribes to the legal fiction that property to the full par value of the stock was paid into its treasury in exchange for the shares. When, as is generally the fact, this is not done in reality, the statutes of the various states enable the directors to pass a resolution to the effect that, in their opinion, the property received by the corporation is worth the par value of the shares issued. As directors at the inception of a corporation are almost invariably irresponsible lawyers and

clerks, such opinion has no value except that of meeting the requirements of the much abused statutes. In rare cases, however, the stock is admittedly not full paid. It is then subject to assessment for the unpaid balance. This custom seems at present to be restricted to Philadelphia companies and to Boston mining enterprises. It is of advantage to the corporation, because its directors may call for the unpaid assessments at any time, but it interferes with the marketing of the stock for that same reason.

**Voting Powers—Voting Trusts.**—It is ordinarily assumed that the person owning stock shall have the power to vote at the election of the managing officers of the corporation. And the laws of certain states prevent a divorce between the ownership and the voting power of corporate shares. But in many cases such a divorce has actually taken place through the medium of the voting trust.

A voting trust is created when the holders of a substantial part, usually at least a majority, of the stock of a corporation transfer their stock to certain trustees, receiving in exchange voting trust certificates. These entitle their holders to all the privileges of stock ownership except that of voting. Any dividends received by the voting trustees are turned over to the shareholders, but the latter exercise no control whatever over the administration of the corporation.

The device is of comparatively recent origin and has been used most commonly in connection with the reorganization of a bankrupt corporation. At such a time the creditor interest represents a far greater actual investment in the corporate property than does that of the stockholders. The latter is merely the shadow of an equity of unsubstantial value. This stock is quoted at a low figure and is held largely by speculators and stockbrokers, who have little or no interest in the permanent welfare of the corporation. Yet, because of its voting

power, these stockholders exercise an absolute control over the property. They can destroy the substantial value of the creditor interests without losing much themselves.

A clever speculator can acquire control with little real investment and thus jeopardize not only the large interests of the bondholders but also impede or even seriously embarrass the recovery of the company. To prevent this, the bondholders and the minority stockholders, or committees and representatives of these interests, arrange that the common stock, and often the preferred as well, shall be placed in a voting trust to be controlled by three or five men well and honorably known in the business world. As a result, all interests are protected by men whose responsibility for their trust is publicly acknowledged and who know that the success or failure of the new corporation will be laid by the general public directly upon them. Their reputations are at stake. As one writer well expresses it:

The result of the normal voting trust has been to insure to a company both stability and continuity of policy, simple features which are often of substantial material advantage to the concern and to all its stockholders. It provides certainty of really responsible management. It makes impossible any disturbing attempts at interference by minority stockholders, which is a reasonable and practical consideration to be recognized frankly and at times properly. It concentrates on a small group the duty of putting a concern into satisfactory condition, giving them both the legal power and the moral obligation to make a real effort to that end. It makes it possible for those in control to formulate a well-considered program for the conduct of the business with the assurance that they may remain unhampered until the wisdom or futility of their plans has been demonstrated.

## CHAPTER III

### BONDS

**Component Parts of a Bond.**—The fundamental distinction between the bondholder as a creditor of the corporation and the stockholder as a partner has already been emphasized. Yet among bonds there are many distinctions and gradations, and the whole position of the bondholder as a creditor is usually hedged about by various conditions and limitations.

At the outset one should remember that a bond is, in truth, merely a receipt from the corporation for a specific sum of money—usually \$1,000—which entitles the holder to participate in the security of a mortgage or other agreement. The bond, therefore, really consists of two parts. There is the piece of paper which passes from hand to hand—ordinarily spoken of as a “bond”—which briefly summarizes certain conditions of the loan, such as the rate of interest and the due date, and refers the owner to the mortgage for further details. Then, secondly, there is the mortgage or agreement, a lengthy legal document which states in great detail the rights of the bondholders, the obligations of the corporation, and the specific property, if any, pledged or mortgaged in security for the payment of the bonds.

The following represents the wording of one of the large well-known railroad bonds:

UNITED STATES OF AMERICA

ATLANTIC COAST LINE RAILROAD COMPANY

Unified Mortgage Fifty Year Four Per Cent. Registered Gold Bond.

The Atlantic Coast Line Railroad Company, hereinafter called the “Railroad Company,” for value received, promises to pay to



....., or registered assigns, .....  
Thousand Dollars in gold coin of the United States of America, of or equal to the present standard of weight and fineness, on the first day of December, in the year nineteen hundred and fifty-nine, at the office or agency of the Railroad Company, in the City of New York, and to pay interest thereon from the first day of June or December, as the case may be, next preceding the date of this bond (unless this bond be dated June 1 or December 1, and in that event from the date hereof), at said office or agency, in like gold coin, at the rate of four per cent. per annum, in semi-annual instalments, on the first days of June and December of each year.

All payments on this bond, both of principal and interest, shall be without deduction for any tax which the Railroad Company may be required to pay or retain therefrom under any present or future law of the United States, or of any State, District, County or Municipality therein.

This bond is one of a series of bonds of the Railroad Company, coupon and registered, which shall not exceed in the aggregate Two Hundred Million Dollars, all of which bonds are issued or are to be issued under, and equally secured by, and are subject to a mortgage or deed of trust dated the 16th day of November, 1909, duly executed by the Railroad Company to the United States Trust Company of New York as Trustee. Reference is hereby made to said mortgage or deed of trust for a statement of the property and franchises mortgaged, the nature and extent of the securities, the rights of the holders of bonds under the same, and the terms and conditions upon which said bonds are issued and secured.

This registered bond is issued in lieu of, or in exchange for, the coupon bonds, bearing the same rate of interest, whose numbers are endorsed hereon, and the coupon bonds so numbered are not issued and outstanding contemporaneously herewith.

This bond is transferable by the registered owner hereof, in person or by his duly authorized attorney, on the books of the Railroad Company at its said office or agency in the City of New York, upon surrender and cancellation of this bond, and, thereupon, a new registered bond, having endorsed thereon the same serial numbers of coupon bonds as are endorsed hereon, will be issued to the transferee in exchange herefor; or the registered owner of this bond, at his option, may surrender the same for cancellation in exchange for a like amount of the principal hereof in coupon bonds, bearing the

serial number or numbers endorsed hereon, as provided in said mortgage or deed of trust, and on payment, in either case, if the Railroad Company shall require it, of the transfer charges therein provided for.

No recourse shall be had for the payment of the principal or interest of this bond against any stockholder, officer or director of the Railroad Company, either directly or through the Railroad Company, by virtue of any statute, or by the enforcement of any assessment, or otherwise, howsoever.

This bond shall not be valid or become obligatory for any purpose until it shall have been authenticated by the certificate hereon endorsed, of the Trustee under said mortgage or deed of trust.

In Witness Whereof, Atlantic Coast Line Railroad Company has caused these presents to be signed by its President or one of its Vice-Presidents, and its corporate seal to be hereto affixed, and to be attested by its Secretary or one of its Assistant Secretaries, this ..... day of ....., 19.....

Atlantic Coast Line Railroad Company,

By

.....,  
President.

Attest:

.....,  
Secretary.

The mortgage referred to is an elaborate document, occupying 93 closely printed pages and explaining, in great detail and with all the sophistry of legal verbiage, every possible phase of the loan.

**Classification of Bonds.**—Bonds differ most fundamentally in the nature of the security behind them, and the following classification, though not exhaustive, will prove convenient:

I. Bonds specifically and directly secured by property (mortgage bonds):

1. A first or senior lien on specific physical property:

(a) General first mortgage bonds

(b) Divisional bonds

(c) Special direct lien mortgage bonds

2. A secondary or junior lien on physical property:
    - (a) Second and subsequent mortgage bonds
    - (b) General and consolidated mortgage bonds
    - (c) Refunding mortgage bonds
  3. A lien on specific securities owned by the corporation:
    - (a) Collateral trust bonds
    - (b) Secured short-term notes
  4. Equipment trust obligations
- II. Bonds secured largely, if not entirely, by the general credit of the corporation (debentures):
1. Obligatory promises:
    - (a) Receivers' certificates
    - (b) Assumed bonds
    - (c) Guaranteed bonds
    - (d) Joint bonds
    - (e) Debentures
  2. Conditional promises:
    - (a) Income bonds
    - (b) Participating bonds

Each of these classes of bonds will now be described briefly in the next few pages.

### I. **Bonds** SECURED BY PROPERTY

1. **First Mortgage Bonds.**—(a) *General.* A great variety of so-called "first mortgage" bonds exist. Railroads, traction companies, lighting companies, power dams, manufacturing corporations, and even mines and quarries, have issued their first mortgage bonds. Yet from the point of view of investment strength, there are great differences in the significance of the mortgage form of these different classes. In some cases, as with mines, the property acquired through foreclosure of the mortgage would be almost worthless, because if the mine could not be made to pay by the original owners, the chances are even less favorable for the bondholders. On the other hand, a railroad, provided it does not run through a desert, is practically sure of earning some return

to its bondholders. It has a fundamental economic value through the monopoly of business given to it by franchises and mere geographical location. This economic value stands for important service to the community, and is inextinguishable. Even the courts will safeguard it. For this reason railroads have been able to bond their properties for a far higher proportion of their full value than have other forms of business enterprise not possessing the strategic industrial and social importance of railroads.

(b) *Divisional Bonds.* Divisional bonds are usually first mortgage bonds secured by a section or division of a railroad's property. They are usually either the relics of old bond issues existing before a consolidation or a reorganization, or else the still outstanding bonds on the integral parts of a great system. The idea has been carried over into other types of enterprises, so that a bond on a part of a street railroad, a section of a hydroelectric company's transmission lines, or even a single building of a manufacturing plant has been called a "divisional" bond.

(c) *Special Direct Lien.* Special direct lien mortgage bonds are secured by a direct first mortgage on real estate, land, terminal depots, docks, wharves, bridges, ferries, and warehouses. Such real estate may be owned by a subsidiary company and leased to one or more larger companies for whose use it was planned, or a corporation may issue separate bonds on its real estate, expecting to give a lower rate of interest where it offers that special security than the general credit of the company warrants.

2. **Junior Lien Bonds.**—(a) *Second and Subsequent Mortgage Bonds.* Second, third, and later mortgage bonds are, as their names imply, subsequent in their lien to preceding bonds. This question of priority of lien, while nominally concerned with the relative position of the bondholders at any

division of assets, is actually a matter of the relative priority with regard to the payment of interest. If the earnings of the corporation are ample, there is little difference between a first and a seventh mortgage, for the interest on all issues is paid before any dividends can be set aside for the stockholder. But if the earnings fall off so as to endanger the solvency of the corporation, the relative position of the various mortgages becomes a matter of primary importance. Interest may be paid on the prior mortgage bonds although lapsed on the later issues; and in the adjustment of sacrifices at the time of a reorganization, the first mortgage bonds are affected least and the later mortgage bonds most. The mere name does not necessarily indicate the real character of a bond's security. Especially is this true of the bond issues of the older railroad systems. What purports by its name to be a third mortgage may in fact be an absolute first mortgage by reason of the fact that the two earlier mortgages have been paid or else refunded into a later mortgage. In fact, so seldom are the words "third," or "fourth," or "fifth" now used in describing new mortgage bonds, that when such a name appears it may be presumed to refer to some old underlying mortgage bond that has withstood panics and reorganizations. Instead, therefore, of implying weakness, it probably indicates a strength underlying the whole debt structure of the corporation.

(b) *General and Consolidated Mortgage Bonds.* General and consolidated mortgage bonds are issued under blanket mortgages which come after all the preceding mortgages. In a large number of instances, especially in the older railway systems, the so-called "general" or "consolidated" mortgage bonds have become, in effect, first mortgages on the entire system, owing to the fact that the earlier first, second, third, etc., mortgages have become due and have been paid. Ordinarily a general mortgage bond agreement contains a clause called the "after-acquired property" clause, which states

that the mortgage covers not only the existing property of the corporation but that subsequently acquired as well.

(c) *Refunding Mortgage Bonds.* At the present time it is common to call general or consolidated open-end mortgages by the term "refunding," in order to throw emphasis on the fact that the issue is designed primarily to pay off the prior existing liens. Such a term conveys, to the mind of the investor, an implication that the issue is of increasing security and it is therefore the more readily salable. After the earlier issues have been paid off, what purports to be on its face merely a refunding mortgage may be, in reality, a first mortgage. The practice of refunding issues is of comparatively recent prominence. In earlier financial history, complete refunding and unification was accomplished only at the time of a reorganization, because of the practical impossibility of inducing the holders of a multitude of different issues to consent voluntarily to the exchange of prior lien bonds into the refunding issue, while without such exchange the equity to the holders of the refunding issue was so small as to make the bonds practically unsalable. The first great piece of financing of this kind was that of the old Atchison, Topeka and Santa Fé Railroad at the time of the reorganization of 1889. At that time 41 different issues, aggregating over \$160,000,000, were refunded into two blanket issues. Subsequently, in the railroad reorganizations of the middle nineties, large refunding issues were uniformly used. Of late years, especially since 1910, many railroad systems have discarded the limping step-by-step policy of financing improvements and have issued instead great blanket refunding mortgages of long duration, with the conscious purpose of retiring all the previously issued bonds and making future improvements by the sale of bonds secured by this one general and refunding mortgage.

Often a little broader idea is conveyed by calling an issue

an "extension and refunding," or an "improvement and refunding" mortgage bond. Especially would such double terms be used if emphasis is to be laid on the use of some of the new money for betterment. Although large in amount, such great open-end bond issues may not be a first lien on any of the company's property and only an inferior junior lien on the main portions. Thus, the great refunding and improvement mortgage of the New York Central is a third lien on the main lines east of Buffalo, a fourth lien on those west of Buffalo, and a second and third lien on various branch lines. So far as the writer can discover, it is not a first lien on any physical property. (The recent additions are fully covered by the underlying Consolidated Mortgage of 1908; the stocks deposited are all subject to prior liens, and the Beech Creek bonds are only second liens on physical property.) The idea, however, in this entire group of bond issues is that there exist underlying mortgages and the general, the consolidated, the refunding, the improvement or extension mortgage, by whatever name it is called, is subject to all these underlying liens.

**3. Liens on Specific Securities.**—(a) *Collateral Trust Bonds.* Collateral trust bonds are secured, not by actual property but by a lien on securities deposited with a trustee as collateral. Collateral trust bonds have now assumed a far-reaching significance in our American finance, a significance which is bound to increase as financial policies and procedures grow more complex. They were used at first by railroads in order to bring into a single merchantable issue of bonds a variety of divisional and branch bonds in themselves unmarketable because of their insignificant size or else because some legal obstacle prevented the issue of ordinary bonds. For instance, the old Union Pacific Railway, when it was prohibited by the United States government, in 1873, from issuing further direct mortgage bonds was involved in a policy of extension in the

Northwest to maintain its strategic position. These extensions were accordingly financed through the issue to the parent company of direct mortgage bonds covering the new construction and those small issues were made the basis of a collateral trust issue of bonds by the parent road. Since 1906, their most extensive use has been in the financial plans of public service holding companies. Here the financial structure has, in some cases, been so complicated that collateral trust bonds of one holding company are security for those of another. In one or two instances this process of pyramiding equities has been carried up several steps.

(b) *Secured Short-Term Notes.* Secured short-term notes are usually merely short-term collateral trust bonds which owe their existence to the demands of temporary financing. They are a kind of emergency security and the banker who sells this kind of bond usually insists that the corporation be free from underlying obligations and will agree not to mortgage any of its assets during the life of the notes.

**4. Equipment Trust Obligations.**—Equipment bonds and car-trust certificates are together spoken of as the “equipment obligations.” These were used only in railroad finance until a year or two before the Great War, but the issue of securities analogous to equipment obligations is now being extended to other corporate enterprises having a large amount of capital tied up in salable machinery and equipment. Thus what was until recently merely an incidental financial expedient now bids fair to play an important rôle in American corporate finance. It is virtually a method by which the company pays for new equipment on the instalment plan, leasing it from the manufacturer or from a trustee, who in turn issues bonds, paid off as the company makes its periodic payments, till finally all the bonds are paid off and the equipment passes to the ownership of the company. Another variation of the same general scheme



is a series of short-term bonds issued by a company itself at the time of purchase of new rolling stock, using that stock as security. Provision in the mortgage will call either for a periodic payment to a sinking fund or for a periodic calling in of a certain number of bonds, till the full payment of the issue, long before the stock is worn out.

## II. BONDS SECURED BY CREDIT

**1. Obligatory Promises.**—The first bonds issued by the railroads in England and the United States were based on the general credit of the issuing corporation. Specific security in the form of a mortgage lien developed later, and it may be said that in England mortgage bonds are relatively rare even now.

(a) *Receivers' Certificates.* When a railroad or public service corporation, or even a manufacturing company, passes into the control of the court, following threatened or actual default on its obligations, the court sometimes authorizes its agents or receivers to obtain money by issuing short-term notes. Such notes are known as "receivers' certificates." They depend for their strength chiefly on the inclination of the court under whose authority they are issued, to enforce the final payment of interest and principal, and the courts will not permit the reorganized railway corporation to assume the management of the property until the receivers' certificates are in some way provided for. Owing to their short maturity and their anomalous nature they are not so favorably regarded by investors as their security would warrant.

(b) *Assumed Bonds.* When a purchasing corporation acquires the physical property of a smaller corporation, which thus passes out of a legal existence, then the purchasing corporation automatically assumes the responsibility for the bonds of the previously existing smaller corporation. Such assumed

bonds are, in effect, a double obligation secured, first, by a direct lien on specific property or property rights, and, second by the direct or implied pledge of the general credit of the corporation which has acquired the property covered by the direct lien. Assumed bonds are exceedingly common in the field of American railroads.

(c) *Guaranteed Bonds*. The commonest form of an indirect guaranty of bonds is that arising when one road is leased by another. The first charges against the rentals will be the payment of interest charges on any bonds of the leased road, and so long as the lease exists it is a virtual guaranty by the large road of the payment of such interest charges, or such an agreement to pay interest charges may be explicitly given in a lease. Except in rare cases an explicit or direct guaranty is printed on each bond. The guaranty represents a contract enforceable at law.

(d) *Joint Bonds*. Joint bonds ordinarily arise through the co-operative endeavor of several corporations, particularly railroads, to build structures or branches of road that can be used jointly. Such undertakings include terminals in large cities, wharves, docks, bridges involving considerable cost, or connecting lines for the interchange of traffic.

(e) *Debentures*. Aside from assumed and guaranteed bonds there is a large class of straight credit obligations unsecured by any direct or indirect pledge of property. They are called "debentures." Such obligations are merely promises to pay a certain sum of money at a given time. They are, in effect, promissory notes resting solely on the general credit of the corporation, although it is now customary for the corporation to issue debenture bonds only under an elaborate legal instrument which defines the conditions of their issue.

**2. Conditional Promises.**—(a) *Income Bonds*. Income bonds involve no definite contract between the holders and the

trustee to insure the payment of the interest, although the company promises to pay the principal at a definite future time. The interest is paid when earned, else the holders of income bonds can enforce their claim, but they cannot force the corporation to pay the interest unless they can prove that it was earned within the period during which it accrued. It should be noted in passing that income bonds are frequently called "adjustment" bonds or even "preference" bonds.

### GENERAL CONSIDERATIONS

These brief descriptions give the outlines only of the security really behind a bond. In speaking of second and third mortgages it was pointed out how much stronger the security may be than first appears. In the field of collateral trust bonds that situation may be sharply reversed. What is given as a first mortgage, may, as in the case of the old Rock Island, turn out to be nothing more than a first mortgage on a deposit of the mere common stock, which may or may not represent real value. Similarly, but more obscurely, a first and refunding mortgage may be found to be a first lien on only an unimportant part of a system that has prior liens on the more important parts not included in the refunding mortgage.

The great disadvantage of all debenture bonds is the uncertainty of security. The purchaser of a debenture bond naturally judges the strength of the issue by the property and earning power which is unmortgaged. But if the corporation should exercise the legal right to place new mortgages on the property unmortgaged at the time of the sale of the debenture, the strength of the issue may be undermined or perhaps destroyed and the holders of the debentures be powerless to prevent it. The credit of the Boston and Maine Railroad was so high for years that it borrowed money on its mere promise to pay. But as the credit of the company declined from

negligence and mismanagement of its property, more and more of its assets had to be specifically mortgaged, so that the property upon which the earlier creditors based their trust was gradually withdrawn from their control. To guard against this, the agreement under which the debentures are issued sometimes specifically provides that no mortgage may be created on the property without including the issue of debentures.

**Open Mortgage Bonds.**—Some mortgages allow of further issues under the same agreement. Such are called “open-end” mortgages, and unless the conditions governing such extensions are very carefully drawn the strength of the bonds first issued will be weakened by the flood of later bonds of equal claims. One condition that often guards open-end mortgages is the requirement that the increase shall always correspond to a specifically proportioned increase in the plants of the corporation. Another may insist that net earnings of the business shall be well above the interest on the new bonds to be issued.

**Earning Capacity as the Basis of Security.**—In analyzing the value of a given bond the truth stands out that earning capacity is the real basis of security. The significance of the economic value of special mortgage bonds, such as those covering only a part of a corporation's property, is even more subject to individual qualifications than is the case with general mortgage bonds. If the division covered by the mortgage is essential for the conduct of the corporation's business, the bonds will be protected at all hazards. Even the interest on the first mortgage bonds on a large part of a railroad system may be defaulted, while that on the underlying bonds of the important divisions are paid. On the other hand, a bond may be of little value, even though it is the divisional bond of a strong railroad system, for if the division is of no value or a burden to

the system it may be more expedient to force the bondholders to take possession of the property than to pay interest on that divisional mortgage.

The strength of a guaranteed bond is similarly limited to the earning capacity of the property covered by the bonds. This fact is clearly shown at the time of reorganization. If the corporation making the guaranty fails, its receiver may continue or repudiate its previous contracts, among which are its various leases and guaranties. If the guaranty is unprofitable he will repudiate it. Nor does the larger corporation of necessity fail before it repudiates its guaranty. It may simply notify the bondholders that it will be no longer responsible. They are helpless, as the only result of attempting to enforce the guaranty would be to throw the larger corporation into the hands of receivers, who will then repudiate it, as they legally may. Of course, so long as the property covered by the bonds earns more than the charges, the guaranty will never be repudiated, even during receiverships.

The real difference between some bonds with a special lien on railroad terminals and some bonds better classified as "joint" bonds, resting on the credit of two or more companies, illustrates the same general principle. In the first case the property behind the bond has genuine earning power of its own in the general market, and in the second the terminal has no outside value but will yield an income only in so far as those particular railroad companies desire to and are financially able to rent it. The wording of the two types may not vary. Only careful analysis of the actual condition of the security will make the difference clear—until some time of failure and reorganization, when the value of the securities meets the acid test of actual earned capacity.

**The Denomination, Interest Rate, and Maturity.**—Besides security there are other conditions of the bond issue, especially

the denomination, the interest rate, and the maturity, which are of great importance alike to the corporation and to the investor. Earlier bonds were always of \$1,000 denomination, but the custom of issuing some of \$100 is now growing; it is a wholesome custom for society at large since it gives the small investor an opportunity to distribute his savings among different investments of high security.

The interest rate among bonds differs too widely to allow of any generalization; usually small coupons attached to the bond itself state the dates and amounts due. The most that can be said is that the interest rate to be paid is determined largely by the current custom with bonds of that kind of business and by the desire to offer such interest as will make the public willing to pay approximately par value for the bonds. If a rate higher than this is offered, the bonds will sell at a price above par; if less, at a price considerably below. Either case is inconvenient for the bookkeeping of the company, and, in addition, a very high interest rate burdens future years with an unusually high fixed charge; the low interest rate and the low market price of bonds gives the company an appearance of weakness.

The period from date of issue to date of maturity—the time at which the principal borrowed must be returned—may be anything from one to one hundred years. A few bonds have been issued in America which were avowedly permanent loans, with no date of maturity, but these are exceptions. One important consideration in fixing the proper life period for bonds is the permanence of the security behind it. A bond which will outlive its security is, in point of fact, a lien only on the general credit of the company. Thus bonds secured by coal lands, quarries, or standing timber, must be of relatively short duration; whereas a bond received by a hydroelectric water power of great strategic importance may extend over many years.

**Convertible and Redeemable Bonds.**—Certain provisions sometimes introduced into bond agreements are attempts to give it some of the attractions that belong to the ownership of stock. Voting power is rarely given to bonds, except in case of default of interest; but certain issues may be converted at the wish of the owner into preferred or common stock. This privilege gives investors an opportunity to watch the growth of a new company until they are willing to assume the risks of proprietorship. A management is glad to make such a provision because the conversion of bonds into stock changes fixed charges into contingent ones.

A corporation may insert in a bond agreement a provision allowing it to pay the bonds in whole or in part before the date of maturity. Any such promise works to the advantage of any remaining bondholder, for it cuts down the issue and leaves the security the same. The selection of the bonds to be "called" first is sometimes by lot, sometimes by number. In the latter case the single issue of bonds is really an issue of a series of bonds differing only in date of maturity.

## CHAPTER IV

### PREFERRED STOCKS

**Origin of Preferred Stocks.**—It has been pointed out already that the distinction between the stockholder as the partner of the enterprise and the bondholder as the creditor was a distinction of great importance from every point of view. Nevertheless, there have grown up, principally since the panic of 1893, classes of securities which are intermediate in relative lien on the corporate property and in priority to earnings between mortgage bonds on the one extreme and common stock on the other. The most important of these intermediate forms is the preferred stock.

The early issues of preferred stocks, say before 1890, owed their origin to periods of corporate misfortune. When a bankrupt railroad was reorganized, the lawyers and financial sponsors of the new corporation, then emerging out of bankruptcy, wished to issue a form of security which should have a claim on the earnings only, provided the earnings were sufficient, yet a claim that should rank ahead of the almost worthless common stock which they proposed to issue. Slowly, however, especially among promoters of industrial companies, the custom grew of issuing preferred stocks for investment purposes. Such issues seemed to give the investor a larger income than bonds, yet did not, like bonds, weaken the corporation's banking or merchantable credit, by creating a direct obligation.

**Conditions of Issue.**—The conditions and limitations of preferred stocks may be grouped, roughly, around four central ideas. There are, first, those conditions having to do with



the position of the preferred stock in case the corporate assets are liquidated or otherwise disposed of. There are, second, those conditions having to do with the lien on earnings. There are, again, those conditions having to do with the protection of the outstanding preferred stock against future issues of other securities having a lien on assets or earnings superior or parallel to it. Finally, there are those conditions having to do with the participation of the preferred stock in the management of the corporation. All privileges and limitations of preferred shareholders come under one or another of these categories.

**Lien on Assets.**—The provision that the preferred stockholders shall receive the full par value of their stock in case of liquidation appears at first glance as a protection of great moment. But a corporation does not liquidate its property unless it is in severe straits and after every possible means for continuing the business has been exhausted. Long before that time the assets of the corporation have probably been pledged or remortgaged and securities of all forms have been placed ahead of the preferred stock, so that if, finally, the point of liquidation is reached there are no assets left for either preferred or common stockholders. But the course of disaster does not, ordinarily, run to this length. Before the affairs of the company get to such straits that liquidation is imminent, the men in control have either had receivers appointed or else themselves proposed some plan of reorganization. In either case the preferred shareholders are compelled to assume a part of the sacrifices necessary to rehabilitate the corporation. Their superior position over the holders of the common stock will rest mainly on the skill with which a committee, appointed to protect their rights, can plead their cause at the time of the general financial readjustment. Experience has shown that in the majority of both industrial and railroad reorganizations the

advantages of the preferred stockholder over the common stockholder are insignificant.

**Provisions as to Dividends—1. Rates.**—On the surface the provisions affecting the dividend, the second class of conditions surrounding the issue of preferred stock, are of most importance. These conditions usually define: (1) what the fixed preferred stock dividend rates shall be; (2) whether or not the dividend payment shall be cumulative, that is, payable later if omitted in any one year; and (3) the rights, if any, of the preferred stockholders to an increased dividend.

It is difficult to make general statements covering preferred stock dividend rates, but as a rule they vary according as the corporation is engaged in manufacturing, in public service, or in the railroad business. Except in the group of railroad preferred stocks, the fixed dividend rate is usually higher than the interest rate on bonds, even though there exist no bonds ahead of the preferred stock. This fact is based on the widely recognized theory that the preferred stockholders, being partners and not creditors of the enterprise, are entitled to a larger return than creditors. Their stock involves a greater risk.

**Rates for Industrial Preferred Stocks.**—The preferred stock dividend rates of industrial enterprises are, as a class, highest. Industrial companies are disinclined to issue bonds. Instead they seek to attract public investment capital through the issue of a preferred stock, and the investing public, conscious of the risks of industrial enterprises, demands a large share of the earnings in prosperous years to compensate for possible lapses of dividends during times of scant profits. When industrial preferred stocks were first extensively issued, the promised dividend rate was placed conspicuously high—averaging upwards of 8 per cent. Subsequently, especially

after the period of industrial promotion following the depression of the middle nineties, the preferred stock dividend rates on industrials averaged somewhat less than it did earlier. By far the commonest rate was 7 per cent. This lowering of rate was due, clearly, to the fact that earlier preferred stocks were regarded with marked suspicion by investors, while on the revival of business following the financial crisis of 1893, the prevalent optimistic feeling toward business induced investors to gauge industrial risks less rigorously, so that they were willing to accept a lower dividend rate.

**Public Service Companies' Preferred Stocks.**—Preferred stocks among public service companies have come into existence very largely since the depression of 1903. These are for the most part of two classes—those issued by operating companies, and those issued by holding companies. Promoters of public service operating enterprises retain for their services the entire common stock. They have therefore insisted on selling to the public a sufficient amount of securities to represent the actual net cost of the assets of the corporation. They cannot sell enough bonds and therefore issue, in addition to the bonds, enough preferred stock to supply the rest of the money. As these preferred stocks are an inferior security, they carry higher rates of interest than the bonds. Because of this higher promised return some investors are willing to assume the large risk. The other class of public service preferred stocks, those of holding companies, were issued to supply the capital necessary to acquire control of local operating companies. The bonds, and usually the preferred stocks, of these local enterprises are allowed to remain outstanding, so that, owing to the extent and variety of the claims to earnings that have precedence over them, such preferred stocks are highly speculative. At the same time they represent a well-diversified investment, drawing their income from many and widely separated local-

ities. As a general thing the dividend rate of these preferred stocks is 6 or 7 per cent. With a market value ordinarily less than the par value, the yield to the investor will average considerably greater than the yield on the preferred stocks of local operating enterprises.

**Railroads' Preferred Stocks.**—As the preferred stocks of railroads have, in the vast majority of cases, come into existence at times of reorganization or financial readjustment, the preferred dividend rate is usually low. These stocks were issued as necessary expedients and were forced upon holders of well-nigh worthless securities—hence there was no need to make them attractive investments. Owing to this circumstance of their origin, fixed dividend rates seldom exceeded 4 per cent, and the average is much lower than the rates on public service and industrial companies' preferred stocks.

**2. Cumulative Dividends.**—A way of attempting to give preferred stock the apparent strength of bonds is to state in the stock certificate that any lapsed payment of one year shall be made up in later years before the holders of common stock receive dividends. Such a cumulative clause is of rather more apparent than real advantage, as it gives an incentive to strain the resources of the company for the regular payment of dividends, and perhaps hurt the permanent prosperity on which the real value of the preferred as well as the common stock depends. On the other hand, the cumulative clause may protect the preferred stockholders from the policy of the board of directors to build up gradually a large hidden reserve for the benefit of the common stockholders, the real owners of the equity, before they declare dividends on either class of stock.

The diversity of stock claims to dividends may be complicated by dividing the entire preferred stock into several issues. The most frequent combination is a 7 per cent

cumulative first preferred and a 6 per cent non-cumulative second preferred stock. The former is sold as a high-grade investment security and the latter as a stock but little more assured of its dividend than the common stock and without the latter's speculative possibilities. The motive seems to be to create a relatively small issue of a first lien preferred stock—occupying a position analogous to bonds—upon which dividends can be almost positively assured, and also a large issue of stock little better in its claim on earnings than common stock, yet a stock issue without the ordinary management rights of the common stock.

3. **Rights to Increased Dividends.**—An attempt to give the preferred stock more of the attractiveness that goes with the hope of extra profits takes the form of an arrangement which permits the preferred stockholder to share with the common stockholder in any disbursements after the common stockholder has received an amount equal to that of the holder of the preferred stock. The arrangement is very frequent among railroad preferred stocks, but comparatively rare among industrials. Sometimes the conditions are made more complicated, as when the preferred stockholders first receive a definite amount, then the common the same rate, after which the dividends on both classes increase by successive steps. It is clear from these examples that almost any variation in the dividend specifications of a preferred stock contract can be made, and in practice it is possible to find an example of every conceivable variety. Usual variations of the dividend contracts are very frequently attached to the preferred stocks of small industrial companies of Massachusetts and Connecticut in order to make their issues attractive to investors.

**Chief Weakness of Preferred Stocks.**—Although seemingly the most significant of the various qualifications of pre-

ferred stock, the conditions of dividend payment are not as important as those that should protect the preferred stock itself from future weakening through the subsequent issue of new securities having a superior or equal lien on the property. The chief weakness of preferred stocks as investment securities lies in the ease with which an unscrupulous or improvident management may place bonds, notes, and bank debts ahead of an already existing issue of preferred stock sold originally on the assumption that there were no prior liens. The preferred stockholders in a corporation are usually investors whose concern in the management is indirect. In the intent of their position they are partners, and they are forced by the law to take the responsibility of partners; in reality they have ordinarily as little to do with the actual conduct of the enterprise as bondholders. For this reason they are entitled to some measure of protection against the ill results of a business policy for which they are only theoretically responsible and the most vitally important protection is that which safeguards them against the dissipation of the assets of the business.

When the preferred stockholder first acquires his shares he is mindful of the condition of the business at that time. Perhaps there are no bonds or notes ahead of this stock, as in the case of many issues of industrial preferred stocks. He relies for protection on the continued priority of the position of his security, knowing that a corporation, once established on so firm a footing as to attract investors to the purchase of its preferred shares, does not commonly become bankrupt through the routine conduct of its business. This is conspicuously true of water, gas, and electric light operating companies where there are a few well-protected preferred shares which have almost the investment standing of bonds. A disaster comes if at all, through unwise extensions. The managers, who may own only the common stock, become intoxicated with their

success in a small way, and falsely assume that still greater success will follow extension. They, being owners of the common stock, have everything to gain through extension, and nothing to lose; the preferred stockholders, being limited in the amount of their dividends, have everything to lose through the failure of these extensions, and nothing to gain through their success. It is to their advantage that the business should be small, compact, and able to resist depression and possible tightness of the money market. It is this diversity of interest between the common and preferred shareholders, while the managing control remains with the former, that constitutes the real and fundamental weakness of preferred shares as investment securities.

**Preferred Stocks and Depreciated Inventories.**—This is not of mere theoretical importance. It is a matter of import to the soundness of American finance. During the period of the Great War, industrial companies made great profits. In order to carry large inventories of expensive raw materials bought at inflated prices, they sold preferred shares to investors and borrowed heavily from commercial banks. In the autumn of 1920, and during 1921, these same raw materials fell precipitously in value, orders of manufactured goods were canceled, and merchandise could not be sold. The liberal margins protecting the preferred shareholders when the stocks were sold were entirely wiped out by the fall in the value of the inventories—yet the banks' loans had to be paid. In literally innumerable cases the preferred stock dividends were "passed" and in many cases large issues of notes or bonds were placed ahead of the preferred stocks in order to fund the excessive floating debt occasioned by the heavy losses in inventories. In brief, the disaster caused by the improvident management of the directors was passed directly on to the shoulders of the preferred shareholders.

**Protection from Note and Bond Issues.**—In very rare cases the directors are prohibited by the by-laws of the corporation from incurring any floating debt at all. Ordinarily there is nothing in the preferred stock contract that restricts the creation of an unlimited floating debt, except that sometimes a reasonable surplus must be created before any dividends may be paid upon the common stock.

It is, however, quite common for the preferred stock to be protected against the issue of bonds, which would take precedence over the stock. This is usually accomplished by requiring that no new bond issue or mortgage shall be authorized without the consent of a large percentage of the outstanding preferred stock. Sometimes it is stipulated that no mortgage whatsoever shall be placed on the company's property. In the case of preferred shares of holding companies it is necessary to provide that the fundamental assets behind the preferred shares shall not be destroyed by permitting the subsidiary companies to issue their own mortgages or notes which "cut in under" the lien of the holding company's preferred shares. In spite of legal precautions, however, instances have been known in which the directors have vitiated these wholesome protections for the preferred shareholders by guaranteeing the principal and interest of bonds of other companies. If the latter fail, such obligations assume priority over the preferred stock in the reorganization plans.

**Protection from Further Stock Issues.**—It is quite usual to provide that the preferred stock shall not be increased without the separate consent of the preferred stockholders themselves. This restriction is frequently embraced in a provision that the proposal to authorize new preferred stock shall be submitted to a meeting of the preferred stockholders called especially for the purpose. Recently, it has become the custom to defeat this entirely wholesome provision by creating at the



outset so large an authorized but unissued preferred stock issue as to render unnecessary any consent from the preferred stockholders for subsequent issues. In very rare instances it is provided, as with open-end mortgages, that the prospective dividends on new preferred stock shall not endanger the stability of the dividends on the old preferred stock. This can be easily done by requiring that the net earnings, after charges, and the accumulated surplus shall be ample to meet the new preferred dividends as well as the old.

**Management Rights.**—Ordinarily the preferred stock has the same privilege as the common stock in the election of directors and other administrative matters. This practice has been generally followed in most of the railroad and large industrial issues, although there are notable exceptions. The most frequent exception to the rule is the exemption of the preferred stockholders from any control whatever, on the theory that the preferred stockholders are merely investors in the company's securities for income in the same manner as bondholders. In such cases, however, it is usually provided that if the preferred stock dividend is not regularly paid, the preferred stockholders obtain voting rights and may even elect a majority of the board of directors.

Contrasted with this exclusion from the management are instances in which the preferred stockholders are given actual control of the enterprise. Intermediate between the exclusion of the preferred stockholders from a voice in the management and the control by them, is the provision that the two classes of shareholders have equal voice in the management until the preferred stock dividend ceases. Then the preferred stock is privileged to elect a majority of the directors. Often, especially after reorganizations, the preferred shareholders will be given the control until the payment of their dividends seems assured.

## CHAPTER V

### THE PROMOTER AND BANKER

**Individual Nature of Financial Problems.**—The great variety of forms in the securities offered the investing public has risen out of the specific needs of the managers of actual corporations. There are no stereotyped rules to define the original arrangement of stocks and bonds of any corporation; there are none for deciding when to pay and when not to pay dividends, when and how to expand, or how to set a broken down corporation on its feet again. All these are questions of good judgment to be determined in each separate case. Certain customs have, however, been established, usually with the indorsement of experience behind them. These customs vary with the type and size of the business and are influenced often by state laws that directly or indirectly affect the issue of securities.

**Conflicting Viewpoints of Promoter and Investor.**—In starting an enterprise, later in determining its dividend policy or seeking to rehabilitate it, the two points of view spoken of in the first chapter must be kept in mind. On the one side is the management of the corporation with its ever-recurring need of capital, its desire to be free from fixed obligations, and, probably, its own special interests in maintaining the value of the common stock and in keeping control. On the other side there is the investor's somewhat conflicting point of view—often varying in relative strength with the social mood of the hour, but all the time directed toward protecting his savings and getting from the corporation a large yearly return. Thus, in issuing any new securities, whether at the time of promotion

or for a later need, the management must offer something "attractive" and at the same time must keep the general structure of the corporation so well balanced that interest charges will not be such a burdensome drain on the earnings of the corporation as to interfere with the best conduct of the enterprise.

**Critical Attitude of Investors at Promotion.**—Investors holding the securities of established companies ordinarily pay little attention to the actual business, concerning themselves, if at all, only with the most obvious details such as present and past earnings, the proportion of the net earnings absorbed by interest charges, and the proportion available for dividends. Once the corporation has been established and its securities distributed it is easy to satisfy most investors about the financial condition of a company. This is not true, however, at the beginning. At the formation of a new company, whether formed to exploit a new idea or to do something already done by others, every prospective investor wants to know a good deal about the enterprise. The company must make a place for itself and establish itself in public confidence. Everyone is skeptical about it, except its incorporators.

**Functions and Types of Promoters.**—The questioning, critical attitude never of itself leads to action. One person at least will be convinced of the value of the new project before it gets to the form of a specific plan, or the corporation will never even be projected. This one person, in whose brain first arises the idea of the enterprise, is called the "promoter." He plays the part of the father or sponsor of the enterprise. This promoter's part may be played by a man usually busy in the detail of manufacturing or of engineering work, or by a banker who may think out the plan for organizing a new combination of small companies. Often it will be played by a man who makes such promotion his main business and who

never expects to keep a permanent interest in the management of the child of his imagination. It may even be played by an irresponsible get-rich-quick gentleman who seeks to get others to pay the cost of exploiting some new idea for his own benefit. There are various types of such professional promoters and unfortunately much has appeared in fiction and in newspapers to create in the public consciousness the impression—often verging on a conviction—that all promoters are by nature impecunious, silvery-tongued vendors of worthless shares in mining and oil projects. There are such, it must be admitted, but their notoriety far exceeds their number or their importance.

**Usual Characteristics of Promoters.**—The promoter who actually takes a significant part in modern industrial progress is a man of the strictest honesty. Temperamentally he is an optimist, open-minded to new suggestions, but skeptical of statements not based on concrete experience; critical, in the sense of being analytical and suspicious of human nature, but uncritical in the sense of being free from the fetters of convention and tradition. Such a man must possess imagination. His is the constructive imagination that is an essential part of business genius. The great promoter has an intuitive appreciation of social needs and the manner in which they affect business. He is not interested in the theory of economic laws, yet he can forecast movements in the supply and demand of a commodity, and project into the future the effects that follow in the wake of a new business enterprise. It is this prophetic imagination of the promoter that blazes the paths of industrial progress. By means of the economic changes that follow in the march he leads, civilization moves.

**Criticism of Bankers.**—The promoter leaves the exact structure and the form of financial organization of the new

corporation entirely in the hands of the investment banker, if he can find one, who will help to raise the necessary capital. The promoter must expect to meet with searching criticism from bankers before they are willing to indorse his enterprise, and he must submit his own estimates to the analyses of their specially chosen experts who will report on all questions of cost and construction.

The vast majority of projects conceived by promoters are never accepted by bankers or capitalists. The usual reason for the rejection of a legitimate enterprise by bankers is that, in their business judgment, the new enterprise does not seem to be in a position to meet an already existing economic demand at a price that will render the company profitable. Often the weakness, from the business point of view, is the prohibitive cost of production. There is an enormous demand for automobiles that is not yet satisfied—and probably never will be—but an enterprise which was projected with a view to satisfying this demand would be rejected by any banker because the satisfaction of the demand would involve the production of automobiles at so low a level of cost as to render the business technically impossible. On the other hand, bankers often fail to appreciate the social and economic need of a new invention. Bell and his associates found it impossible to secure the co-operation of any bankers at the time of the promotion of the telephone, not because of doubts concerning the telephone itself but because of doubts of the existence of an economic demand for telephones. Subsequently, after Bell and his associates had convinced the public of the economic demand for telephone service, new companies sprang up in all sections of the country seeking to take advantage of this newly created demand. Bankers then supplied the campaign with capital.

**Intuitive Judgment of Trained Bankers.**—So thorough and strict is the criticism offered by bankers that probably not more

than one in ten of the projects submitted are accepted as good "working propositions." A trained banker seems to scent intuitively the enterprise which will be successful. This precision of what one might call "intuitive judgment" is largely, although not entirely, based on the banker's insight into the business ability and integrity of the promoter. Luck has little to do with it—Adam Smith stated that good and bad luck belonged to the vocabulary of small shopkeepers. The fact that successful bankers thoroughly trained in their business almost invariably select successful enterprises with which to identify themselves, while others have an equal partiality for enterprises that ultimately result in failure, is not a matter of chance, nor is it the result of the normal accidents and hazards of the business world. Investment bankers must feel, with extreme sensitiveness, the intangible atmosphere that surrounds every enterprise. They lay far greater stress upon the intellectual and moral capacities of the men associated with the prospective enterprise than they themselves recognize or are willing to admit to their clients.

The conspicuously successful operators in any stable line of industry—and the number for each industry can in all probability be counted on the fingers—can secure any reasonable amount of capital at any time from any one of a comparatively large group of bankers. This statement is especially true of successful operators of electric light and power companies, of railroads, and of cotton mills. Some men cannot secure capital from bankers at any time, even though their enterprises are objectively sound. All of this means that a successful promoter who can win the backing of investment bankers of standing willing to furnish him with the requisite capital must have marked ability and high business integrity.

**The Banker's Reputation.**—The banker knows that his own chief asset is this reputation for good judgment coupled

with his stalwart honesty. The good-will reflected in the success with which he directs investments brings customers to him for advice and enables him to sell the securities he has to offer. He protects this reputation by every safeguard and every possible outside aid to his own judgment. He will call in the help of expert accountants, of engineers, of patent attorneys, and of corporation lawyers. But after all these experts have rendered their reports the ultimate judgment must remain with the banker himself. He alone is responsible in the end; he cannot shift the burden. And he recognizes this fact. He knows that if the enterprise fails he cannot excuse himself on the ground of an engineer's faulty judgment or of the error of an accountant or a lawyer. For instance, a few years ago Boston banking interests promoted an inter-urban traction company in the West. Reputable lawyers asserted that the franchises, rights, and titles upon which the road was built, were sound. After operation had commenced, the road was sued for damages on the ground that it crossed the previously granted right of way of a railroad corporation, which existed only on paper. The bankers could not hide behind the blunder of the lawyers, because they were responsible for hiring the lawyers.

In the end the success of a banker is reflected in social rather than personal terms. He succeeds according as he is able to conserve the resources of society by selecting for his indorsement those enterprises which supply an economic need and have a social justification, though to the promoter he often seems overcautious and a hamper to progress. Through the motive of safeguarding his own funds and his own reputation he really safeguards the savings of society.

**Determination of the Financial Plan.**—The exact procedure in starting a corporation and the arrangement of stocks and bonds to be issued will vary according to circumstances. The plan to be followed in exploiting an entirely new invention

is quite different from that to be followed in starting a new concern in an established business; and that again differs materially from the procedure of combining a group of small concerns into a single corporation, whatever the type of business. This difference is most marked in the methods used for selling the first securities, that is, for getting the initial capital. The investment banker, on whose recommendation the small investor depends, will have nothing to do with the promotion of certain kinds of enterprises, for the project is in a field so untried that it offers a degree of risk he cannot properly advise another to take. The big or little investor who trusts to his own judgment must be called on to take the initial risk of furnishing the first capital. When the banker does act as financial sponsor of the new corporation, he will have much to do with determining the securities to be issued.

A discussion of the machinery of the promotion of corporations falls most conveniently into topics arranged according to the nature of the business. New enterprises with new products differ from new corporations in old lines of business, except that a few types of enterprise, such as mining, are by their very nature working always in an untried field. The methods of marketing securities, whether of new corporations or of old, are quite generally the same. But in other aspects of their promotion, manufacturing enterprises are best treated apart from all public service corporations. Railroads further differ in important respects from the narrower field of public utilities—the gas, water, and electric light plants. It is convenient, therefore, to discuss separately the financial plans to be followed in the promotion of these different types of enterprise.



## CHAPTER VI

### THE PROMOTION OF NEW ENTERPRISES

**Stages in Promotion.**—All business enterprises, as has been said, owe their existence in the beginning to the imagination of some one man. Very frequently he co-operates with others, so that the original plans appear to be the results of the joint efforts of a group of men. The American Telephone and Telegraph Company owes its existence to the imagination of Alexander Graham Bell and his enthusiastic confidence in the commercial adaptability of the telephone, but the success of the company in its earliest years was due quite as much to the financial skill of another man, the advertising ability of still another, and the remarkable power of organization of yet another.

In general, there are five stages in the promotion of a business enterprise. The first is the conception of the enterprise by the promoter; the second is the working up of the details of the enterprise, again by the promoter; the third is the formulation of the financial plan, usually the joint effort of the promoter and the banker; the fourth is the formation of an underwriting syndicate by the banker; and the last is the sale of the securities of the enterprise to the public, from whom ultimately the capital is obtained. But in the promotion of a company undertaking some entirely new enterprise the third and fourth steps are omitted, for in such enterprises the investment banker plays no part. The banker must have some body of evidence by which to predict future earnings from past actual experience before he can risk his reputation by recommending to his customers that a given security is even relatively secure.

**The Promoter and Inventor.**—The exploitation of a new invention intended to meet a general demand—like a new collar button, a new hairpin, or even a new camera—is at best a mere gamble. The psychology of the “people” is so complex that the value they will place on a new article is absolutely unpredictable; the public buys because a new device or a new toy takes its fancy, whether it be autographic cameras or automobiles, and though the successful promoter of such enterprises gradually acquires skill in interpreting the probable market for the article from the first signs of the public’s attitude toward it, and lessens his risk by testing out the public demand before he invests very much in any new enterprise, he will even so have only the most speculative securities to offer.

The promoter of a new enterprise may be the inventor. Ordinarily, however, he is not. The inventor is usually a man of mechanical skill and clever originality, but quite as frequently unaccustomed to giving economic values their full significance. He is what is often called an “impractical genius.” A promoter must possess not only a prophetic insight but also the power of transforming a vision into a definite instrument of economic usefulness. In other words, he must possess what might be called “business imagination” and be a man of simple common sense.

**The Promotion of an Invention.**—When a new invention attracts his attention the first matter that he must attend to is that of patents. No business can be based on an invention, discovery, or even a “trade-mark,” unless it may be protected by the courts from infringements. Especially is this true if the invention pretends to cover some fundamental idea upon which there can be a variety of modifications and adaptations which duplicate the purpose of the invention without infringing the letter. In such cases a competitor may spring up, should

the new invention prove successful, and sell a large quantity of goods on the strength of the advertising program paid for by the original company. At the time of the exploitation of the vacuum bottle there was no fundamental basic patent, and as soon as one company had made a market for the goods, competitors sprang up who could sell goods that were identical in all respects except name. As the original company had made the mistake of fixing the retail prices too high, the competitors secured a wide market and liberal profits by selling what was in truth "the same thing" at a distinctly lower level of price.

After being assured that the patents or licenses under which the invention is to be sold constitute a substantial protection which the courts will uphold, the next step of the promoter is to consider the market. It may seem more logical for the promoter to determine first the cost and probable selling price, since the latter will influence the demand, but in practice his concern is with the demand at some approximate price, in order that he may decide whether or not to proceed with a further investigation. In case the new product is intended for general consumption he has absolutely no test to apply in regard to the magnitude of the possible sales at some assumed price. It may "take," in which case the new product may experience an enormous demand, quick but transient, or it may meet a steadily increasing demand somewhat proportionate to the extent of the advertising. More probably—and this is the fate of the vast majority of new inventions placed on the market to meet a popular demand—there will be a few sales in response to a comparatively large expenditure for advertising, but these will cease entirely when the advertising ceases. In such case, the new invention is, in the plain language of business, a failure.

**Inventions to be Sold to Manufacturers.**—The exploitation of patented articles that are to be sold to manufacturers is not

quite as uncertain as that of articles made expressly to satisfy a real or anticipated popular fancy. If the article is intended to meet a special demand, as an automatic attachment for a loom or a simplified high tension transformer, the task of predicting the possible demand is relatively easy. The ultimate success of the patented article will rest very largely on a careful computation of the amount the manufacturer will save in the costs of production by the introduction of the new device. The more progressive manufacturers will adopt the improvement if there is the slightest hope of decreasing costs; others will adopt it only as a last resort after its economy has been proved over and over again. The vast majority of manufacturers will occupy the middle ground. If the promoter has a meritorious attachment or improvement that can be counted upon to reduce the costs appreciably, so as to save an amount considerably in excess of the investment required to install it, he can compute with a surprising degree of accuracy the upper and the lower limits of its demand. The success of the company promoted to sell the new device will rest, then, on its ability to meet this demand at a price that yields a profit.

Having estimated, or rather guessed, the probable demand for the new article, the promoter will probably retrace his steps and determine more exactly the cost of manufacture and the margin of profit at the assumed selling price in order that he may correct the latter. In case the article is for general demand the most difficult element of the cost to determine will be that of advertising and marketing. For details in this field the promoter will probably draw liberally on his own experience, reinforced by that of advertising managers who give their advice either independently as "experts," or else as employees of advertising agencies. If the article is easily made, the promoter will probably secure estimates for its manufacture, preferring not to use the little capital at his disposal in erecting a plant for the new company.

**Organization of a Company.**—After he has assured himself of sufficient information to feel confident that the exploitation of the invention will be profitable, the promoter must organize a company and secure the necessary capital. The organization of such companies is of the simplest sort. Common stock is issued; some of it is given to the inventor, some to the promoter and any other active partners—the rest offered for sale. The main point of comment is on the methods of sale. Quite generally the promoter will try to interest some single capitalist in the invention, who will supply the money necessary to start the company; less often the stock will be offered to the public. In the latter case, the invention is probably of little value, as a promoter will find no difficulty in securing private capital if the invention promises to be of merit.

**Sale of Stock by the Corporation.**—The methods used in drawing capital from the general public for these most speculative enterprises are, however, interesting of themselves. There are various devices used. The company may assign a certain number of shares to its own treasury and then announce a sale of “treasury stock.” The risk of sale and the expense of newspaper advertising and distributing circulars are borne by the corporation itself. Unfortunately this straightforward method of selling securities is not in good repute. Investors have a natural suspicion of a company which not only attempts to conduct its own business, but which also tries to solicit the investment of capital; and this feeling has been intensified into a well-founded prejudice by the fact that fraudulent mining, oil, rubber, and real estate companies have followed this practice. To avoid this prejudice, corporations wishing to sell their own stock have adopted one of two other methods.

Some director, officer, or other person closely connected with the embryo company, serves as its “fiscal agent.” The advertisements in which the securities are offered to the public

seek to represent the fiscal agent as an independent banker, and not a mere representative or employee of the company and its promoters. Furthermore, the announcements are usually so worded that a reader would be led to believe that the statements contained are made on the responsibility of the fiscal agent rather than on that of the company's promoters or officers. This is done in order to give the impression that an outside person has assumed the independent responsibility properly belonging to a banker, and upon that responsibility is offering the securities to the public. The other subterfuge adopted to enable a prospective corporation to sell its own securities without appearing to do so is to cause a subsidiary company to be incorporated, the character of which permits it to deal in stock or other securities. In practice the operation of this fictitious corporation is identical with that of the tactics of the fiscal agent.

**Sales Through Fictitious "Banking Houses."**—Often men of thoroughly honest intention, with a burning enthusiasm for their invention or their discovery, finding a cold reception from bankers, drift into the hands of swindlers who exploit the simple-minded and honest inventor for their own profit. There exist so-called banking houses with fictitious names, investment companies, incorporated fiscal agents, and the like, who stand ready to distribute worthless securities at an exorbitant commission, and the fact that the enterprise has to some extent an economic basis often gives the advertising material distributed by these fictitious "banking houses" or "investment bankers" a very plausible ring, whereas the truth of the matter is that the risks of the enterprise, whether they are legitimate or illegitimate, are so great that no reputable bankers will jeopardize their business standing by backing it. There is usually some clever writer in the organization who acquires a devilish skill in preparing circular advertising matter well suited to deceive the credulous public; and the fraud

perpetrated by these fictitious investment bankers is often more artistically executed than is the case when the corporation, or its promoters, seeks to distribute the securities by one of the more direct methods heretofore described. The commissions exacted by such swindlers are usually enormous, representing the major part of what the public pays for the securities. For instance, the Sterling Debenture Corporation, engaged in the distribution of low-grade securities, sold the stock of a certain electrical device for \$10 a share. Its commission amounted to \$9 a share.

**Appeals to Desire for High Return.**—Various devices are used by the distributors of speculative or fraudulent securities. The most forceful appeals are to the desire for high return and to the speculative instinct, on the part of the possible investor. The latter is directly or indirectly promised a rate of return on his prospective investment far above that ordinarily expected from a conservative or even somewhat speculative security. The glamour of the increased income overrules his sound business judgment. He is told that, "the increased cost of living has made it necessary for the corporation to pay a liberal amount for its money," as if the company were engaged in a philanthropic calling, one of the purposes of which was to alleviate the distress caused by rising prices. Another excuse is the economy of distribution obtained through selling the securities directly to the public. "Co-operation between producers, distributors, and investors will result in saving of expense and waste sufficient to divide large profits with all," or "Every time you buy stock from a salesman or broker, you are paying a premium of 20 to 25 per cent, which is unnecessary waste, and would be a good dividend for two years on the money which goes into the company's treasury." Often in order to strengthen his position, the writer of such advertising bulletins casts reflections upon "Wall Street" and

the "avaricious horde of robbers who infest our financial districts," in order to show by contrast his scrupulous honesty and liberality to prospective investors. And the small investors, who have probably worked very hard for their savings, feel that the great sacrifice represented by their small accumulations somehow entitles them to a higher return than meager interest rates paid by savings banks or on investment bonds. They are easily deluded into thinking there is some connection between the psychological sacrifice of saving and the economic compensation for the saving, and forget that fluid capital in the form of money, unlike labor or business ability or land, is of one and the same nature, whatever its origin, whether laboriously saved by the clerk or merely "set aside for investment" by the capitalist.

**Appeals to Speculative Instinct.**—The speculative instinct of man combines at least three psychological elements, present in greater or lesser degree in us all. The first is the desire for accumulation, the fundamental instinct for possession. The second is a kind of self-conceit, the feeling that somehow we, individually, are cunning enough to anticipate and profit through the future. It is a kind of self-assurance, the *amour propre* of Rochefoucauld. The third is the natural inclination to get something for nothing, the temptation to take a crosscut, the same characteristic which is so important a stimulus to labor-saving invention, and, broadly, one of the underlying motives in the technical progress of the race. Those who seek to defraud the small investor through the sale of worthless securities understand well the full significance of the speculative instinct, and these three roots. One of their devices is to claim that the stock should be bought while the company is just starting, as an advance in the price of the stock will soon occur. "It is very much to your interest to join me now. In the oil business, fortunes are made over-



night and the small investor of today is the millionaire of tomorrow. Stock of a company operating near us in Texas recently rose from \$10 per share to \$20 per share, practically overnight. Act today!" And most appealing is the description, carefully worded, of other marvelously successful companies whose stock might have been purchased by the small investor during the promotion period. If it is an oil well, stories of clerks, postmasters, day laborers, who purchased shares of some "bonanza" oil company are told in dramatic fashion. All such anecdotes—some of them doubtless true—are closed by the significant words: "If you want to share in the marvelous profits of the oil industry, then buy the treasury stock of . . . . . immediately. Don't wait." Often such a direct command is followed by another equally dramatic, but pathetic, anecdote of some man who was offered a bonanza stock but followed his wife's advice and put the money in the savings bank or a parlor rug!

The imagination of the promoters does not always confine itself to the particular industry in which the new company is engaged. Any other successful, well-known enterprise will answer the purpose. Copper mines and sewing machine companies are given as reasons for investing in oil companies and rubber plantations!

**Appeal to the Investor's Vanity.**—In addition to the appeal to the investor's avarice and speculative propensity, some shrewd promoters have recently made a direct appeal to the investor's vanity. This appeal is not so potent as the appeal to the investor's avarice, but it is certainly more original and can be made more dramatic. It is especially significant with prospective women investors. Sometimes the promoter plays on the investor's social or professional standing, as when the stock is offered to a "selected list of teachers, of which you are one"; or when "it is the desire of the directors to dispose

of the first block of treasury stock to men and women prominent in social life. You are urged not to lose this privilege of securing a permanent income. Please fill out accompanying blank, which is for your own personal use, and is not transferable." Sometimes it plays on the prospective investor's high opinion of his own ability, as when the prospectus states, "You are selected from a large group because of your known skill in choosing conservative, yet profitable investments. The privilege of subscribing has been limited to the leading persons from your state. Unless you reply within thirty days this privilege will be withdrawn, and will go to someone else."

**"Sucker Lists."**—There are, indeed, men and bureaus which collect names of men and women who, for one reason or another, may be presumed to be susceptible to the elusive advertising matter distributed by the promoters of highly speculative and worthless securities. Two main sources supply the names: men or women who at one time or another have bought such stocks, and men and women in the various professions. To get the former, the stockholders' lists of defunct and low-grade companies are ransacked. Once a woman buys a few shares of a mine or oil well, her name gets on one of these "sucker lists" and she is pestered for years after by advertising matter of this kind. The other source is the published lists of the professions and to some extent well-to-do farmers and highly paid artisans. The physicians, teachers, dentists, and clergymen constitute a happy hunting ground for these economic pirates. Women school teachers afford perhaps the most fertile field; as a class they know nothing about business or investment; they usually earn a little more than they spend; they are much concerned with laying aside a competence for their old age, are credulous, and easily deceived by men familiar with business, and are accustomed by long habit to making decisions on practical matters without consulting

other people. Often teachers and clergymen are seduced by some wily promoter into turning salesmen for a fraudulent security, thinking the enterprise sound and honestly managed. Acting under this delusion they persuade relatives, friends, and associates to buy worthless stocks.

**Proper Backing of Speculative Enterprises.**—Practically all industries at their very beginning, and many industries, such as mining and oil drilling, under all circumstances, are unable to obtain capital through the investment banker. Thus the question naturally arises as to the proper means of selling securities of highly speculative enterprises if successful direct selling requires the use of methods now frowned upon because used by swindlers. One observation is surely true. The highly speculative enterprise should not be backed by the general public. It requires too much investigation and discrimination. The chances of loss are too great. For this reason the stock of a highly speculative enterprise, no matter how meritorious in itself, should not be advertised for indiscriminate investment. It should be backed in the early stages by a man or group of men of wealth (by friends, perhaps, as in the case of Bell and the telephone), who have the time for a careful and exhaustive investigation and who, should their investment prove a loss—as it probably will even after the most painstaking investigation—are able to stand the sacrifice. But to take the savings of hard-working men and women to develop a speculative undertaking, no matter how meritorious in itself and honestly managed, is little short of a social crime.

## CHAPTER VII

### THE PROMOTION OF NEW COMPANIES IN ESTABLISHED FIELDS

**The Promoter in Established Industries.**—The work of the promoter in starting a new manufacturing establishment in an industry already well known differs considerably from that of initiating an entirely new industry on the one hand and that of organizing a public service enterprise on the other. The promoter of a new factory is almost invariably a manufacturer previously successful in the same line of work. Frequently he has promoted other successful factories and has thus secured the confidence of capitalists as well as of the public. Sometimes he is himself without means, but has risen to the position of superintendent or sales manager of a large establishment and seeks to start a small factory of his own. In such cases local merchants, bankers, and even the public, will enter the new enterprise with him, because of his proved ability and familiarity with the business. If the town in which the promoter lives is devoted to one industry, he may have gained a reputation for skill of management and even be solicited by local capitalists to "build a mill of his own." In all such cases the promoter succeeds by his familiarity with the business rather than through any foresight or skill in interpreting economic needs. For that reason his is not a typical promotion and he does not make the promoter's characteristic contribution to our industrial development. The promoter of an enterprise of this type can almost assuredly count on the help of some investment banker in selling such securities as are to be publicly sold. This banker will probably, with or without the aid of the promoter, formulate the financial plan according

to which bonds and stocks are issued. He will supervise the organization and he may audit the construction accounts in case considerable amounts of money are to be spent immediately.

**Formulating the Financial Plan.**—The financial plan of a new manufacturing enterprise is ordinarily simple in general outlines, in that it involves few kinds of securities, but there are many considerations which make its formulation extremely difficult. Foremost of these is the great uncertainty of the earning capacity of the new company. This of itself makes it unwise to issue bonds and limits the securities to common and preferred stock. The question of how the group concerned in promoting the enterprise can keep the control in their own hands also rises, for usually preferred stock as well as common stock is given voting power.

**Estimate of Probable Earnings.**—It is necessary, also, to make as accurate an estimate of future earnings as possible before determining the amount and dividend rate of any preferred stock, for the credit of a company is badly affected if the payment of the dividend on the preferred stock is irregular. If possible this estimate of future earnings will be based on the earnings of some other concern doing the same or a very similar business but such comparisons with established companies should be made only in industries operating under conditions which afford ideally free competition, where goodwill patent rights, or other intangible elements are not of substantial consequence. These include relatively small businesses easily undertaken by men of average ability, businesses in which no patented processes or machines are required, or, if required for economical operation, may be licensed or purchased by anyone. Furthermore the business should be one which produces a stable commodity sold in such form that

the identity of the producer is of no concern to the ultimate consumer. Any business complying with these conditions will yield a rate of return determined by the average rate of interest on the capital investment and the relative skill of management exercised by the men in control.

**The Management Factor.**—The reason for the difficulty in estimating profits is that they are so enormously dependent upon that particularly variable element, the skill of management. Estimates of earning capacity even where based on the earnings of similar businesses must therefore be adjusted on the basis of at least one element which is unknown and which is more important than all others. If the man who is to undertake the management has been successful elsewhere under similar conditions, there is less uncertainty. But even then there may be present some small but not insignificant element which renders a seemingly parallel or identical case unsuitable for comparison.

This is particularly true when a successful manager of a small plant assumes control of a much larger plant. Twice in the history of the New England Cotton Yarn Company the men in control of the company made the fatal error of inferring that a man who had been successful in running a single mill could be equally successful in the management of a group of mills. In both cases heavy losses followed, leading to forced reorganizations. A certain enterprise has six factories in the Middle West. To gain efficiency it built at a cost of \$10,000,000 a thoroughly modern mill, the largest of the kind in existence. The directors selected as manager the man who had been the most successful in the operation of the small factories. He made a failure of the large one. Ultimately its management was given to a man who had shown less than ordinary ability in the management of a small unit. His administration was successful.

**"Dead Reckoning."**—When a manufacturing business is started in a new geographically locality a process of "dead reckoning" is often used in the effort to predict future earnings. For example, the superintendent of a St. Louis shoe factory happens to be visiting in Dallas, Texas, and finds that large quantities of shoes are imported from St. Louis and even from Lynn and Brockton. He seeks to interest local capitalists in the erection of a modern shoe factory, the administration of which he will control. In order to prove to the local bankers that the factory would pay, he will probably obtain more or less reliable estimates of the profits of the St. Louis shoemakers to prove that the industry is, in itself, profitable. He will then gather statistics covering the sale of shoes in the jobbing district of which Dallas is the center and at the same time compute the cost per pair for labor and raw materials at Dallas. In all such cases, no matter how accurate the statistical computations, there are many unknown factors which will modify the final outcome, not the least of which will be the superintendent's lack of experience in selling shoes in Texas. A study of what other people are doing in any line of business should not for a moment be considered as an accurate indication of what a new man can do under new conditions, however close the parallel may seem.

**Investment Traditions and Prejudices.**—In general, two considerations influence promoters and bankers in plotting the financial plan of a new manufacturing company. These two major considerations are the estimated earnings—regarding which, as has been indicated, little can be said with definiteness—and the general traditions and prejudices of the investors to whom the securities are to be sold. This is much less a matter of surmise than the probable earnings, although it is of less permanent significance to the company itself. Investment is a matter of fashion. Customs established and pre-

judices deep-grounded in the minds of investors cannot be changed easily; the promoter must observe them whether he would or not. This is excellently illustrated by the current and accepted custom that bonds should not be used in the financial plan of a manufacturing enterprise. Historically it is explained by the fact that manufacturers and bankers in New England, where most of our manufacturing industries originated and where many of them are even now located, are traditionally opposed to creating a direct funded debt on a manufacturing plant. This old tradition has been strengthened by two very important considerations. Bonds are taxable in several New England states, whereas stocks are not. Added to this is the very important fact that banks are more willing to loan money on the general credit of a manufacturing company with liberal net quick assets if it has no bonded debt on its plant. While the tradition against bonds is stronger in New England than elsewhere, it is nevertheless true that the financial plan of every manufacturing enterprise must give at least some weight to it.

**Stock Issues Against Mere Prospective Profits.**—The principles stated above must be applied differently according to the nature of the manufacturing business for which the promoter or banker is formulating the financial plan. In the case of a specialty manufacturing business and similar speculative enterprises, only one class of stock should be issued. The whole future earning capacity of the enterprise is so doubtful that no investor can be expected to consider a preferred stock any more secure than the common stock, and all will prefer the latter because it will carry greater opportunities for speculative profit. Needless to say, the bonds of such an enterprise will be practically unsalable, except at rates of discount. If sold, the proceeds would yield the new company no more money than the sale of the same amount of common stock. The rule



for the financial plan in such cases is simple—only common stock should be issued against mere prospective profits. And as human nature, especially that of credulous people, draws some connection between the par value on the face of the certificate and the actual value, promoters and bankers usually issue stock in amounts far exceeding what any reasonable expectations of profits would warrant. In order to keep the control of the management of the company still in their own hands, they issue to themselves such large amounts of the stock in return for patent rights and banking services that their proportion will exceed that sold to the public.

**Stock Issues Against Estimated Earnings.**—If some special condition of the business makes it possible to reach some plausible estimate of earnings on the basis of the previous earnings of the plants or of the nature of the industry, a preferred stock may be issued to be sold to a group of men sometimes called “speculative investors.” Yet even those cases in which the industry conforms to the theoretical conditions where prophecy of earnings would seem to be most reliable are subject to individual uncertainties. Changes in the cost of raw materials and in the rates of interest and of wages render any particular estimate of the future earnings little better than an intelligent guess; and at the time of promotion, before the efficiency of the new management under new conditions has been tried out, preferred stocks even in an established and stable industry must be considered highly speculative. When there are two classes of stock issued in the first instance, most or perhaps all of the common stock will be used in payment for services at the time of promotion; it will be given to the promoter, the banker, attorneys, engineers, and general utility men. In case old plants are taken over into a new combination, stock in the new company may be used in place of purchase money.

**The Promoter's and the Banker's Profits.**—The exact proportion of common shares that shall go to the promoter is always the subject of considerable negotiation. Invariably the banker takes the lion's share, under the supposition that the risks of furnishing capital are greater than those of furnishing imagination and enthusiasm, presuming that the evil consequences to a banker's reputation likely to follow from the failure of an enterprise are more lasting and more serious than in the case of the promoter. Custom seems to have decreed that about 10 per cent of the common stock is a fair compensation to the promoter, but this may be increased very much if the promoter assumes larger functions than those of merely conceiving the enterprise. Where he combines the functions of inventor, promoter, and banker he may even take 51 per cent of the entire capitalization as his compensation.

The rate of commission for selling stocks is higher than that for selling bonds—varying, too, as the indorsement of the company carries with it risk or prestige. For industrials such as we are now considering it is highest—leaving out of account the wholly speculative securities considered in the last chapter. For any given grade of security it is remarkably uniform among the different dealers. Out of 15 cases of initial issues of local industrial preferred stocks the average commission was found to be  $14\frac{1}{4}$  per cent—about 3 per cent of this was probably absorbed in selling expenses. Besides his commission for selling the securities, the banker may be given also a bonus of common stock for his services. High commissions or long profits tend to make preferred stocks very popular with the salesmen of banking houses and their high rate of income yield makes them popular with a certain class of security-purchasers; but the apparent high return is not real in either case. The investment banker will need to protect his reputation by buying back the securities he sells at only a few points under the selling price, even if the company proves to be less successful than it

had been before, and in the long run this will reduce considerably his total profits on preferred stocks.

**Underwriting Syndicates.**—In any case unless the issue is very small the investment banker will not attempt to handle all the issue himself. He will make arrangements with other bankers to "take over" certain proportions of each issue, stipulating in the agreement not only the price which the fellow-banker will pay for his share but also the price for which the latter is to dispose of it to his customers. This fellow-banker will also probably expect to "support the market," in case any of his customers may wish to sell.

In the small local investment banking houses one or two men both select and sell the securities, but such small concerns would seldom if ever have facilities for promoting new enterprises. They deal in the securities of established concerns, which are handled much as any other merchandise and with a very low commission, or in speculative securities, in neither of which cases is there any implied guaranty of supporting the market.

**Organization of Large Distributing Houses.**—The investment banker most often appealed to to act as sponsor of a new enterprise is the large distributing house. Its business is ordinarily chiefly with bonds, but the methods of selling are the same and will be put into play once the details of a purchase or underwriting of stock has been arranged by the buying department. The selling department is the larger department of the business and the one with which the public comes most in contact. The entire selling organization is under immediate charge of a general sales manager who controls the selling organization as well as all the branch offices. While the sales manager may now and then conduct a general newspaper advertising campaign, his chief reliance is upon the representatives of the

house who personally visit the investors. The retail selling of securities rests more on the personal solicitation of salesmen than does the retail distribution of any other form of property. A retail banking house is an organization of men. In addition to the home office, there are salesmen who travel over the territory immediately adjacent, and representatives of the banking house who range over all the important bond-buying districts. These men have their headquarters, consisting possibly of a little office or a hotel room, in the largest city of the district which they cover. They are given exclusive privileges in their localities and any inquiries made at the home office are referred to the representatives.

**Training Bond Salesmen.**—In the larger bond houses there is a regular system used in procuring, training, and paying the representatives. As the customers are probably men of considerable education, great care must be taken in the selection of the salesmen-apprentices. They are usually young college graduates, chosen more often because of the social position and standing of their families than because of any other reason, but to succeed they must possess an attractive personality, great patience, cheerfulness, and a natural willingness to take trouble for other people. They must be true salesmen in the best sense of the word. Yet they need know nothing about the business, and can make a modicum of success without ever learning much about finance, or even appreciating the science of investment. A certain stock salesman of a small eastern banking house has succeeded solely because of his wonderful good nature, his natural kindness, his abounding good health, and a clean, handsome face. He is always welcome; people are glad of his mere presence. Consequently he sells securities, although he knows nothing about them. He smiles, and lets the customer do the talking.

During the first year of their apprenticeship the salesmen

are paid \$3 a week, or even nothing at all. These apprentices are at constant attendance at the home office "learning the business." But practically no work is expected of them, except that they may be sent on errands. At the end of their apprenticeship these men are given an opportunity of meeting a few customers. Usually they are asked to call on their friends and relatives first. Subsequently they will be tried out among strangers. If they show an aptitude they will be advanced to regular positions in the home office or else given territory of their own as district representatives of the house. Later if they exhibit marked success they may be given small participating partnerships in the bond house. This has proved a strong inducement to hold the loyalty of especially able salesmen to the large banking houses at lower salaries than they could rightly anticipate from competing but smaller houses.

**Lists of Possible Customers.**—Each investment house keeps an exhaustive list of possible customers. Indeed it has been said that every eastern bond house has, or ought to have, a list of at least 70 per cent of all the bond-buyers of consequence in every city or town in New England. This list is carried on cards on which also are noted the peculiarities of the investor, his investment prejudices, and—if possible—a list of his investment holdings. These cards are kept constantly up to date, through the information obtained during the personal calls of the various representatives. In any town it is presumed that the bank directors, savings bank trustees, successful and middle-aged physicians and dentists, architects, and perhaps lawyers, are bond-buyers. The names of such are taken from local sources and visited by the representative. The method of one successful salesman when he went into a town for the first time was to find out from the hotelkeeper who it was that knew "all about the folks in the town." Sometimes it was the hotelkeeper, sometimes an old woman. He made the

acquaintance of this person who, after a few days of careful cultivating, developed into an intimate acquaintance. From him or her he gradually evolved the past history, financial retrospect and prospect, the weaknesses, scandals, feuds, and the like of some score or more of the town's leading citizens. He catalogued all this information on cards. On his first visit to a prospective customer he merely talked on subjects he was interested in—or rather allowed the "prospect" to talk. He did not try to sell securities until his second or third visit.

Again, the sales manager can buy lists of stockholders of well-known corporations, the presumption being that a stockholder is a possible investor. There are men who travel about gathering stockholders' lists. A man by having one share of a corporation transferred to his name may gain access to the list of stockholders of practically every corporation. These names are tabulated and sold to bankers, usually at a charge of \$1 per hundred. The lists are chiefly used for circularizing a special security, particularly a preferred stock. They indicate persons who have in the past purchased securities resembling those about to be offered, and the presumption naturally exists that such people may be induced to purchase similar securities of another similar enterprise. Again, too, the settlement of estates, bequests, and sales of property are watched with the purpose of guiding the reinvestment of such funds.

**Meetings for Salesmen.**—As stated earlier, all investment dealers, whether the large bond house or the local dealer, rely primarily on personal solicitation to sell both bonds and stocks. To supply the salesmen with the proper information, meetings are held at regular intervals at which a member of the buying department or the sales manager, or in the case of the small local dealer, the proprietor himself, explains in great detail the new issue of bonds or stocks that the salesmen will be asked to work upon. In this talk the "selling points" of the issue will

be brought into bold relief. If it is a public utility issue the salesmen will be told all about the locality, its geography, industries, and potential economic possibilities. In the case of large new issues with which the organization proposes to become permanently identified the entire selling force may be taken over to inspect the property. In addition to all the selling points, a good sales manager will probably take up in detail all the possible objections and reasons for declining to buy with which the salesmen will be confronted. Most of all, the sales manager will seek to instil in the men a real enthusiasm for the issue. If he understands his work he will succeed in making each man feel that the issue is a remarkable investment opportunity, one which it is a real privilege to participate in. If the manager succeeds in creating this enthusiasm the issue will be sold; otherwise it will not. No amount of statistical information will serve as a substitute for enthusiasm.

**Bond Circulars.**—As a help for the salesmen and as a written memorandum, the bond house will supply its men with the bond circular. This is the only advertising matter used. And so hidebound and sensitive is investment opinion that the bond circular must conform exactly to established practice or else it prejudices the possible investor against the issue. Its tone must be direct, formal, critical, and it must be absolutely devoid of demonstratives and superlatives. As a general rule the higher the investment grade of the issue the more colorless and unenthusiastic will the circular appear. The bond circular should merely state facts; adjectives, enthusiasm, and “punch” are to be supplied by the bond salesman himself. In form the typical bond or high-grade investment preferred stock circular consists of a four-page leaflet, printed on a good quality of laid paper. The first page consists of a brief summary of the issue, with the investment dealer’s name at the bottom. The second, third, and, if need be, the fourth pages

of the circular are occupied with the "President's letter." This is a comprehensive account of the securities offered, the nature of the enterprise itself, its capitalization, and earnings. These letters are seldom if ever written by the president of the company; he merely signs them in his official capacity. The true author is some member of the bond house whose especial business it is to prepare them as a part of the general machinery of selling.

**The Real Function of Investment Bankers.**—Reference has been made already to the care exercised by the reputable investment house in the purchase of securities. This is of great service to the investor and the community. The investment banking house of good standing ranges itself always on the side of established business enterprise, tried business judgment, and the conservative and responsible management of property. Its advice concerning the purchase of securities is, unfortunately, invariably biased by the goods on its own shelves, and too frequently by the length of the profit, because such banking houses are still primarily merchants of securities rather than counselors. Yet the counsel of a high-grade, long-established bond house is almost invariably sounder than the untutored and casual judgment of the customer himself or the haphazard opinions he may glean from his friends and acquaintances. The bond house has its reputation at stake, and it knows that an untarnished reputation is the most valuable asset it may acquire. An unreflective or a selfishly narrow opinion on any security will remain lasting evidence of either faulty judgment or downright misrepresentation.

The fairness of attitude toward competitors shown by the high-grade investment houses is not attained in any other business. An employee of a reputable organization will not "knock" the securities offered by other houses, much less misrepresent them, provided they are inherently good. Like all salesmen he



may declare that his own wares are the best, but such pride will not be carried to the degree of disparaging his competitor's goods unless they are undisputably bad, and in such cases he will be content to point out their weaknesses in general terms.

## CHAPTER VIII

### RAILROADS AND CONSTRUCTION COMPANIES

**Simplicity of the Financial Plan.**—The financial plan of a new railroad is in certain respects a simpler and in certain respects a more complex problem than that of either a manufacturing or a local utility company. It is simpler because there are ordinarily fewer kinds of securities and less intricate conditions of issue. It is more complex because the actual construction is usually undertaken by an intermediate finance company, the fortunes of which largely mould the financial plan of the railroad.

The amount of new railroad construction since 1912 has been very small, indeed, and by far the largest part of this has been the building of small subsidiary offsprings of the larger systems. In fact, it may be said new independent railroad construction has been a negligible element of our industrial life since the panic of 1907. In strictness, of course, a discussion of the promotion and the financial plan of a new railroad excludes these branch and connecting-line roads built by the larger systems. Yet these usually came into existence as separate corporations, although their parentage is thoroughly recognized, and the steps of such promotions are often strikingly like those of the smaller independent systems.

**Private and Public Aid Extended to Original Railroads.**—Originally the new railroad was a civic improvement. The Baltimore and Ohio Railroad was built in order to give Baltimore access to the region beyond the Alleghany, the original New York and Erie in order to give the lower tier of New York counties access to a market. When capital was being

gathered for the Western Railroad of Massachusetts, clergymen preached about the economic, social, and—by implication—the moral value of the enterprise. Often, in order to stimulate subscriptions, great mass meetings were held along the line of the proposed road and local newspapers lent their editorial and news pages to the prospective enterprise. Often there was a house-to-house canvass for subscriptions, similar to those in behalf of the Liberty Loans of the Great War; large areas of Philadelphia inhabited by people of moderate means were canvassed in behalf of the building of one of the early sections of the Pennsylvania Railroad.

In addition to the private aid extended to the new railroad enterprise, towns, counties, states, and the national government granted them lands, money, and credit. In New England the towns would issue their bonds and then with the proceeds buy the bonds of the railroad enterprise. In sections of the Middle West and South the states or territories would commonly grant land, and in the Far West land grants were made by Congress. Many, perhaps most, of the new enterprises could not be made to pay immediately, owing to the undeveloped sections of the country and the large expenses of operation. Consequently most of them failed. In the case of the New England enterprises the towns were forced to shoulder a new burden of debt, and elsewhere the bondholders lost practically their entire investment. Yet in spite of the individual losses, the waste of public lands, and the misuse of public credit, it is doubtful if the railroads could have been built so quickly or extended so rapidly in any other way. New lands were opened up long before conservative judgment would have prompted, and once opened up became a national asset of great value. The hectic finance of early railroad-building was the price—on the whole a very cheap price—which the country paid for the marvelous industrial expansion which followed the extension of cheap transportation.

Many of the methods pursued in these early promotions are still followed, without the use and abuse of public credit and without the glamour of public acclaim. The promoter is usually now a civil engineer who has had some practical experience in railroad construction. Quite frequently he is a native or resident of the locality in which he proposes to build his new road. At all events he makes himself popular with the influential men along the proposed route. He secures traffic agreements with the connecting lines and makes the necessary connections with bankers. Subsequently he superintends construction, and after the completion of the road he may continue to operate it.

**The Construction Company.**—The outstanding feature of railroad promotion is the construction company. This element may be, and often is, present in the promotion plans of other enterprises which involve large building operations, but it is an almost universal adjunct of a railroad promotion. Many forms of construction companies have existed in the past. The two which have become classic in the literature of railroad promotions are the Credit Mobilier, the construction company for the original Union Pacific, and C. Crocker and Company, the construction company for the original Central Pacific. The construction of the Central Pacific Railroad (the rôle in it played by C. Crocker and Company and the four evil geniuses of the undertaking, Collis P. Huntington, Leland Stanford, Charles Crocker, and Mark Hopkins) is a story of misrepresentation, deceit, and wanton betrayal of trust, far more than is the history of the building of the Union Pacific.

**Procedure in Small Railroad Promotion.**—The typical procedure in the promotion of a small railroad follows certain established lines. Several of the leading stockholders form a corporation to the share capital of which they subscribe in

cash. This independent corporation is now given some fictitious name, say, the Alleghany Construction Company. The railroad corporation, having acquired its charter and certificate of incorporation but owning as yet no property, then enters into a contract with the construction company covering the actual building of the road. Sometimes the title to the right of way is acquired directly by the railroad, but more often by the construction company. The contract between the two provides that for every section of 1, 10, or 100 miles of completed road turned over by the construction company to the railroad, the latter will surrender to the construction company a certain number of bonds and stocks of the railroad. The first section of the road is built by the money subscribed by the stockholders of the construction company. The construction company meets the cost of the second section from the proceeds of the sale to the public of the bonds and a part at least of the stock received by the construction company from the railroad. For this second section, completed, the construction company receives another block of securities, which are sold to meet the cost of the following section. The process is continued until the last section is completed.

As a result of this procedure, the construction company ends by owning the margin or remainder of the securities of the road not actually sold to secure the money for the labor and materials needed in construction. Provided these remaining securities—as is presumed, although not always true—are worth more than the stock capital originally subscribed by the stockholders of the construction company, the latter will have realized a profit. These securities remaining in its hands may be divided among the shareholders of the construction company, or sold for cash and the proceeds divided.

In rare instances the construction company is kept alive as an investment company. The Aroostook Construction Com

pany was incorporated February 28, 1891, for the purpose of building the Bangor and Aroostook Railroad. The construction company had left in its treasury, after completing the railroad, practically all the railroad's stock. Instead of dividing or selling this stock the construction company has been continued as a kind of investment and controlling company for the railroad. As things now stand the construction company, with a capital stock of \$500,000, owns virtually all of the railroad's \$3,800,000 of common stock, which controls the railroad, representing an investment of approximately \$30,000,000.

**Sale of Securities.**—In the early period of railroad-building the members of the construction company, individually or in the name of the railroad, sought to sell the securities to the public. This was entirely satisfactory so long as the public continued to buy the bonds of the unfinished road; but when the construction company failed to effect a steady outlet of the securities and it became choked with undigested obligations of the railroad it was short of money to pay for materials and labor. Work ceased and the whole enterprise came to a deadlock. Sometimes a new construction company was formed to assume the obligations and assets of the old, but more often the railroad and the construction company failed together. Several successive construction companies for instance were used in building the Pacific railroads.

Of late years the construction company has assured itself of an outlet for its securities, as one of the necessary prerequisites of starting the whole enterprise, by contracting with bankers for their sale to the public. The bankers, in consideration of liberal commissions and stock bonuses, agree to buy the bonds of the construction company for cash as rapidly as they are received from the railroad. Granting the integrity and selling power of the bankers the construction company

becomes assured of sufficient money to carry out its building contracts with the railroad.

**Sources of Profit.**—Three sources of profit fatten the treasury of the construction company—profit on land purchased on account of the road, profit on labor and materials furnished for construction purposes, and profit from the direct sale of the railroad securities. Aside from the ability of the construction company to market the railroad bonds, a matter which is paramount to the success of the whole enterprise, the success to the construction company turns upon the character of the building contract upon which the relations of the two corporations are based. As the few stockholders of the construction company are the influential stockholders of the railroad company, this contract is usually conspicuously favorable to the former corporation—so favorable indeed is it sometimes that the few within the inner ring reap an inordinate surreptitious profit. In consequence the new road emerges with a large volume of stock and bonds, which stifle it almost before it is born. In a few notorious instances, like C. Crocker and Company in connection with the building of the Central Pacific, the individual members of the construction company reap exorbitant secret profits by personally selling their company supplies and construction material at prices above the market. In that instance, to give a semblance of legal immunity, C. Crocker resigned from the directorate of the railroad in order to devote himself to the construction contracts, and his brother took his place on the railroad's board.

**The Building of the Hampden Railroad.**—One of the most notorious of construction company exploitations was that of the building of the Hampden Railroad. The outstanding facts seem to be as follows: In 1910, Charles Mellen, then president of the Boston and Maine Railroad, the latter having passed

under the control of the New York, New Haven and Hartford Railroad, conceived the idea of connecting the Massachusetts Central, a poor single-track subsidiary of the Boston and Maine, with the New York, New Haven and Hartford at Springfield. This link would represent about 15 miles of line. It would enable the New Haven and the Boston and Maine roads to run trains from New York to northern New England points over their own tracks. Mellen gave one Gillett, then head of the Woronoco Construction Company, to understand that the Boston and Maine would lease the Hampden Railroad when built, and assume its bonds and stocks. This understanding was ratified by both the directors and the stockholders of the Boston and Maine.

Gillett and his business associates then formed the Hampden Railroad Company, of which Gillett was president. Gillett next formed the Hampden Investment Company, with himself as president, to take over the securities of the railroad as rapidly as issued and to supply, through loans on these securities, the necessary construction money. The contract which Gillett, as personifying the Hampden Railroad Company, made with himself, as personifying the Woronoco Construction Company, involved the building of the road at definite unit costs, and cost plus 10 per cent. The road was built with such heedless extravagance, considering its situation, as to suggest that the contractor labored arduously to increase the cost, both by extravagant expenditures and by excessive and surreptitious profits. Most of the work of excavation, for example, was sublet to other contractors. On the excavation covered by these subcontractors the Hampden Railroad Company paid the Woronoco Construction Company \$2,686,093, whereas the Woronoco Construction Company paid the subcontractors \$1,595,270. The apparent profit to Gillett's contracting company was, therefore, \$1,090,824, or upwards of 40 per cent of what was paid the subcontractors. Gillett's



report to the Massachusetts Commission showed a cost of \$4,396,000, or \$300,000 a mile! At that time, in its nearly finished state, the road was only 14.8 miles in length and reached no important terminals. It had only four insignificant way stations. The Interstate Commerce Commission report states, "The Hampden Railroad runs through a stretch of country which presents no unusual difficulties in the construction of a railroad. It was admitted that by using a different location, by making the road somewhat longer with somewhat less favorable grades, it could probably have been built for from \$35,000 to \$40,000 per mile." A profit, however, was not realized by anyone because the Massachusetts Public Service Commission would not allow these inordinate expenditures to be capitalized, and the burden shifted to the shoulders of the Boston and Maine. And when ultimately the Boston and Maine passed into the hands of receivers, the Hampden Railroad, the Hampden Investment Company, and the holders of the latter's notes were left without a foster parent to assume the burden.

#### **Legitimate Functions of the Construction Company.—**

Fraught though it is with real and apparent fraud, the construction company serves several useful purposes in railroad promotion. Ordinarily the new railroad would find it very expensive to secure its right of way if it attempted to do so openly. If the land to be used by the new road is quietly bought in by the construction company, with very little stir, a lower price is invariably paid and no antagonisms are engendered. Again, the use of the construction company permits the railroad to issue "full-paid and non-assessable" stock, since there is no issue of stock for specific property that can be independently valued. The road merely surrenders a certain amount of securities for a certain quantity of finished road, and no one can say that it has not received full value. Again,

too, the road knows, or should know, the exact cost of the road in terms of the only thing the railroad can give—its own securities. So that in spite of the ill repute into which the construction company has fallen, its use is still retained in promotions. One may sincerely believe, however, that the old profiteering by insiders very rarely occurs now.

**Predominance of Bond Issues.**—With the exception of the rôle of the construction company, the financial side of railroad promotion is relatively simple. After the promoter has secured the right of way he arranges with bankers to secure the necessary money. As the promoter is ordinarily a railroad engineer, the usual practice is to leave to him the management of the construction company, the purchase of material, the hire of labor, and the arrangement of traffic agreements with other lines. The bankers confine their attention to the actual financial plan and the more difficult task of the sale of securities.

Ordinarily only first mortgage bonds and common stock are issued, the former representing the actual cost of the road and the latter the prospective profits of promotion. This is possible because the class of what one might call "speculative investors," to whom bankers would probably sell the securities of an embryo railroad, would not buy preferred stocks, but would insist on just the things bonds and common stock can give—apparent security and an interest in the prospective profits. There are no earnings to show, and if prospective earning figures are vouchsafed they can be made liberal; consequently if a large number of bonds are issued in the beginning it does not create a prejudice against the enterprise. Investors have become accustomed to large bonded debts for railroads and are not frightened by them. Consequently the bankers can formulate a financial plan in which the par value of the bonds may equal or even somewhat exceed the actual cash expendi-

tures. Even then, as much, if not all, of the land on which the road is built may be a free gift, it is quite within the truth to say that the actual property of the new road exceeds the par of its bonds.

Common stock is issued at the time of promotion in very liberal amounts. It is the lubricant which makes the wheels of promotion turn easily and smoothly; it costs the road nothing. With the road unbuilt, the value of the common stock is very little and that little is prospective earning capacity, to be made actual only through the concerted endeavor of the very men to whom it goes as compensation for promotion services. In this way the amount of the interest-bearing securities and the charges upon them may be reduced to a minimum. Were it possible to sell preferred stock alone, or even preferred stock with a liberal bonus of common stock, as is done in the case of industrials, small railroads could be promoted without the initial burden of a heavy bond issue. Unfortunately, however, the buyers of railroad securities demand mortgage bonds for their money and the pattern of the financial plan must be cut accordingly; and to this policy of issuing a predominance of bonds over stocks, able authorities attribute the general unsoundness of railroad finance in the years just before the Great War.

**Description of an Actual Promotion.**—The case of an actual promotion of a small road may be used to illustrate the procedure outlined above. In the account some of the details concerning underwriting syndicates are omitted as well as certain unessential matters which needlessly complicate the description for the purpose of illustration. A small road of 60 miles was projected through a new country. The promoter was a civil engineer who had previously had charge of construction for a large trunk line extending through the section. He was thoroughly familiar with the railroads in the region as well as

with the general economic conditions. Through persuasion, helped by a pleasing personality, he secured the gift of the entire right of way and the terminal sites in three of the five towns through which the road was to pass. The promoter and two banking houses next formed a construction company, which assumed the title to the real estate to be used by the new railroad. The railroad company was then incorporated, after the necessary legislative sanction had been obtained. The completed road cost, for the labor of grading, for third quality ties, for 60-pound relay rails, the necessary sidings and yards, and for the erection of five small stations and one terminal, approximately \$850,000 in actual money. The promoter and the bankers, as directors of the railroad, contracted with themselves as the executive committee of the construction company to deliver over to the construction company \$160,000 in first mortgage 6 per cent bonds and \$180,000 in common stock in return for each section of 10 miles of completed road. At the same time the bankers contracted with themselves as the executive committee of the construction company to buy the bonds of the company at 90 per cent, provided they were allowed in addition \$120,000 in stock for each 10-mile section. The prospective profit to the construction company was therefore \$60,000 par value of stock for each section, since the actual money received from the bankers was entirely absorbed by the direct outlay for construction. The first 10-mile section was completed with money subscribed by the construction company's stockholders—the promoter and bankers. Thereafter each section was built from the proceeds of the sale to the bankers of the bonds received for completing the previous section. At the same time the promoter arranged with the manufacturers of equipment to buy two small "rebuilt" locomotives for \$25,000 and to pay for them by the delivery of \$27,500 par value of the first mortgage bonds of the railroad. He also purchased two second-hand passenger coaches and a combina-

tion passenger and baggage car for \$6,000 in first mortgage bonds. The freight cars of other lines were hired to save the cost of freight equipment. Summarizing the financial plan employed in this instance, there would be outstanding at the completion of the road :

	Authorized	Issued	
First Mortgage 6% Bonds.....	\$3,000,000		
Issued for the following purposes:			
Roadbed (Construction Company)		\$960,000	
Locomotives .....		25,000	
Coaches .....		6,000	\$ 991,000
Stock .....	2,000,000		
Issued to:			
Construction Company.....		\$1,080,000	
Promoter in return for services, including securing of land.....		<u>500,000</u>	\$1,580,000

The vital point of the financial plan of any promotion of this kind, the relative amount of fixed charges the business can carry wisely, was not considered, because the promoter had assured himself of enough traffic to pay at least 6 per cent on the cost of construction and had no need to plan further.

The device of paying for equipment in bonds is very common. In the case of a large order the equipment companies require that an equipment trust be created. In cases of smaller sales at least one among the many competing equipment manufacturers will accept bonds in payment for equipment, provided, of course, there is reasonable chance of selling them. The procedure resembles that of New England manufacturers of textile machinery in accepting stock of new cotton mills as payment for mill equipment.

#### Promotion of a New Interurban Electric Railroad.—

Closely related in most respects to the procedure in the promotion of a new steam railroad is that of a new interurban electric

railroad. In the period from 1897 to 1907 there was a very extensive development of interurban properties all over the eastern and central states. Enormous amounts of money were sunk in these projects on the expectation that they would revolutionize passenger transportation. Many had been promoted by men who wished merely to sell land along the right of way. The large majority of these roads were at first only partially successful, even though little or no depreciation was charged against earnings. Subsequently a very large proportion actually failed. Those which were able to keep out of the hands of receivers were in the majority of cases burdened with only a low bonded debt. But a very few have proved in the long run to be financially successful or, indeed, sufficiently remunerative to have justified their original construction.

Since the Great War the conditions of the interurban have gone from bad to worse. An illustration of the extreme conditions is the Bay State Street Railway. This covers all of the eastern part of Massachusetts (with the exception of metropolitan Boston)—one of the most densely populated and prosperous sections of the country. Owing to increasing costs of operation, steadily depreciating equipment, competition with automobiles, and a multitude of lesser causes, the road ceased to earn enough to pay its interest charges. Fares were raised on many of the lines, but without avail. It passed into the hands of a receiver in December, 1917.

**Neglect of Depreciation Reserves.**—The pronounced weakness of the financial plans of nearly all electric railways is the neglect of the importance of depreciation. A road overburdened by bonds might survive for the first half-dozen years, or even first ten years, because new equipment and a new roadbed could be used for a few years without expensive replacements. But sooner or later large renewals become absolutely necessary. Without a depreciation reserve these renewals

must be capitalized and the money to pay for them obtained by the sale of more bonds. This course brings the road deeper and deeper into the quagmire of bonded debt.

**Rigidity of Modern Tests.**—The promoter of electric railways must nowadays subject his enterprise to more rigid tests than the enthusiasm of the inhabitants along the proposed line. After securing his necessary franchises he must, like the promoter of any other railroad or public utility, be able above all else to predict the demands of the community for the new service, now and in the near future. With the help of an engineer he can predict costs with a surprising degree of accuracy; but the probable traffic and the probable effect of the opening of new transportation upon traffic are more difficult. In the actual procedure the promotion of the interurban electric company and the steam railway differ but little. Generally speaking, the attempt has been made to use a smaller proportion of bonds in the financial plan of the former. Preferred stocks are used in a larger number of cases; yet such statements are only indicative of general tendencies. The bankers expect a slightly lower commission for the sale of the securities of new steam railway companies than for those of other public service corporations, perhaps because the former are now usually promoted in close connection with some already established railroad.

## CHAPTER IX

### THE PROMOTION OF PUBLIC UTILITIES

#### **Differentiation Between Railroads and Public Utilities.—**

Though in the eyes of the law, railroads and traction companies are public service corporations as much as water, gas, and electric light companies, certain special conditions make it simpler to consider the latter group alone, under the general name of "local public utilities" or just "public utilities." Chief of these special conditions is the relatively small amount of the labor cost in their Expense account. In this respect railroad and traction companies are in as sharp contrast with them as are manufacturing concerns.

**The Promoter of a New Public Utility.—**The promoter of a new local public utility is now quite often not a man engaged in the business of operating utilities. Generally speaking, he is a "leading citizen" of some community, who is spurred on by a desire to improve the standing or economic resources of his home region. Sometimes this motive is purely altruistic, desiring to bring about a community improvement as a social service; sometimes this leading citizen, who assumes the rôle of the promoter, is prompted by a desire to raise land values, to stimulate industries, or even to sell the enterprise merchandise; sometimes it is a mixture of motives, not the least of which is that of seeing himself as the president of the only utility the town can support.

**The Prospectus and Franchises.—**In any case, unless he has funds of his own to start the company, his first effort must be to prepare a report or general prospectus in order to interest



banking houses in the possibilities of his undertaking. To make such a report satisfactorily he must above all else be able to predict the demands of the community for the new service, now and in the near future, and must be able to form an accurate idea of the influence of the new enterprise on the immediate development of the territory it serves. This is an important point. It very frequently happens, as in parts of New England, that the demand for electric power already exists and can be definitely measured, but that this already existent demand cannot be increased. A new railroad will itself create most of its traffic by supplying the means of transportation for ore, coal, or other natural products without which the road would not be constructed. But a new utility cannot create customers, although its presence may stimulate new uses for the services it offers.

The promoter of lighting companies must secure the active co-operation of local interests, especially of the prominent business men and the politicians of the community concerned. Ordinarily the towns and municipalities are willing to grant a liberal franchise to any promoter who is in a position to give improved lighting service or cheaper power, and his efforts will be directed toward obtaining the grants without burdensome restrictions and for a long period of time. This part of the promoter's work is of great importance, as the public authorities will invariably grant more to the prospective railroad or public service company before the service is begun, from a sense of expediency, than they will ever grant afterwards from a sense of justice.

**Cost of Construction and Probable Earnings.**—As soon as the promoter has settled in his mind the scope of the new lighting or power company and has secured the necessary public sanction, whether certificate of exigency, or franchise, the next task for him is to compute the cost of the building of

his new undertaking and the probable earnings. The former can be determined with a remarkable degree of accuracy by means of definite provisional contracts entered into with construction companies, steel mills, and the manufacturers of equipment. If the promoter is personally familiar with the price of materials and construction within the field of the new enterprise, he will be able to estimate for himself the cost of construction. In case he is not familiar with these facts he will enlist the help of an engineering firm of acknowledged standing whose estimates will be relied upon by the men from whom he is to ask capital. And with these estimates completed his own special work will be finished. The promoter will then seek to obtain the co-operation of bankers, construction companies, finance companies, underwriting syndicates, and all the intricate machinery of modern finance. These phases of the promotion will be discussed in subsequent chapters.

**Underestimated Costs.**—It is much easier to form proper estimates of the costs of construction and gross earnings of small properties than large. For example, in the case of a small hydro-electric power plant in the South, the promoter-engineer estimated the entire cost of construction and equipment at about \$1,200,000; the actual cost was about \$1,100,000. Such a case of overestimation of costs is almost unique, but the discrepancy between the "estimates of competent engineers" and the actual costs is apt to be much less, proportionately, in small enterprises. The firm of engineers which built the Mississippi River power plant underestimated the cost by several million dollars. Owing to the variety of possible unforeseen contingencies the actual cost of hydro-electric plants is apt to vary from the estimated cost by a larger figure proportionately than is the case with railroads and lighting and traction companies.

**Tests of Earning Capacity.**—The banker will put his own special group of experts to work to check the report and estimates of the promoter. He or his representative will visit the town where it is proposed to build or acquire the new utility, in order that he may judge for himself certain things about it; he will estimate what proportion of the population, from geographical position and general level of income, might be expected to be customers of the new company.

1. **Population.**—Population is always “estimated” by the promoter and these estimates are invariably too high. Not only are the census figures inflated by unwarranted additions since the last census but neighboring localities are included, notwithstanding the fact that the utility would not by any stretch of the imagination reach out to them. Then, too, even if the exact census figures are used there is a marked difference between mere population and prospective-customer population. Scattered farmers in outlying rural districts are of no consequence to a gas or electric company, although they are to the street railway. A man, wife, and thirteen children living in a hovel on the far outskirts of a southern city do not contribute to the population for the purpose of computing electric light earnings—useful though they may be in determining the Congressional representation.

2. **Wealth and Industrial Activity.**—The wealth and industrial prosperity of the general region to be served is a matter which the banker must study with great care. Communities in the United States may be roughly divided into three classes according to their stage in what may be called the “economic cycle.” There are communities which bear all the signs of vigorous, healthy, growing youth. Industrial activity is at high pressure. There are no houses to be hired,

no unemployment. New workers are arriving on every train. Capital, costly to obtain, is nevertheless in great demand. The deposits in the local banks increase with amazing rapidity, yet these deposits all find profitable employment at home. This is the stage of commercial youth. Later on, perhaps in another generation or in another hundred years, the economic life of the community seems to show signs of abating. There are well-established and widely known industries which have been in existence for many years. But there are no new industries. There is little unemployment, but few people are moving in. The banks are operated by old men who are content to let well enough alone. Deposits are stationary, and a considerable proportion of the loans are placed by notebrokers among outside borrowers. There is little building, and houses are relatively easy to rent or buy. This is the maturity or "middle-life" stage. Finally, perhaps after several more generations, the community shows unmistakable signs of economic decay. Factories are deserted. The enterprising young men and women leave the town. The only faces one meets in the streets are those of old men or ambitionless and degenerate young men. The banks have relatively large deposits—represented in considerable part by savings accounts. Except as accommodations to the local merchants, relatively few loans are made to the depositors. The main street even on Saturday afternoon carries a sleepy atmosphere—except now and then a murder by the degenerate scion of one of the old families or a scandal in the home of the middle-aged deacon. This is the "old-age" stage. Truly communities have a life cycle to the economist, just as much as mountains and plains to the physiographer.

It is of great—even controlling—importance for the banker to appreciate fully the point in this economic cycle at which the community where he proposes to build or acquire the utility stands. It is of far greater importance than the engineer's ap-

praisal of the present value of the equipment based on a count of the poles and transformers or a measurement of the miles of main. A railroad, for illustration, serves many communities, so that the decay of one may be fully compensated for by the industrial advance of another, just as the stability and regularity of a railroad's earnings is assured only by a diversity in the character of its freight. But a public utility serves only a single community. Capital placed there by the banker must remain; and its fortunes or misfortunes are the fortunes or misfortunes of the community. There can be no distribution of risk, no balance of the progress of one community against the decay of another. Reference will be made to this paramount fact later in this chapter in connection with the discussion of the financial plan to be followed in promotion projects.

**3. Moral Temper of the Community.**—Perhaps next in importance, after noting the economic status of the community, the banker will try to obtain some idea of its moral temper. Many lines of evidence bear on this. The banker's representative will ascertain the relative thrift of the inhabitants by gauging the subscriptions to Liberty Loans and War Saving Stamps and the deposits in the savings banks. For thrift has a moral as well as economic significance. The banker's representative would have noted, in the old days, the relative number of liquor saloons, their patronage and the amount of liquor shipped in—now he will try to find out the amount of bootlegging. The larger the proportion of a man's income goes for liquor, the smaller the proportion for the electric light bill of his home. The representative will note the proportion of house-building that is being done by owner-occupants, for owner-occupants of houses furnish the backbone of a more stable population—and besides, a man will wire his own house when he will not undergo the same expense for a

tenant. He will note also the credit ratings of the local merchants and the appearance of their stocks of goods; the character of the schools and the proportion of taxes devoted to education; the contributions of the locality to churches and charities; the general appearance and the moral conditions of the "slums"; the presence of graft and corruption in public life and the statistics of crime and vice—these and many other factors will supply evidence in determining the prosaic question: Will an electric light company pay?

4. **Previous Earnings.**—There are now, however, far fewer promotions of utility projects which are of entirely new construction than promotions representing the remodeling, reorganization, or combination and extension of previously existing small utilities. In these instances the outside banker employs all the tests and checks outlined above, and has in addition a very reliable test in the actual earnings in previous years of the utility or utilities which he proposes to reorganize. When a small electric, gas, or water plant is built by local men the promoters are actuated partly by hope of profit and partly by civic pride, but they seldom have the requisite technical skill at their command and practically never understand the intricacy of modern public service problems. Their enterprise prospers by reason of the mere growth of the community, but their management is inefficient and backward and they have no capital for extensions and improvements. The same conditions may prevail in the adjoining cities and towns. Then an electrical, gas, or hydraulic engineer with banking connections, or a banker with an engineer as an associate, may buy the local enterprise and those of the adjoining communities with the purpose of reconstructing them, and for this purpose form a new corporation to assume the ownership of the franchise and the physical property of the old operating companies. The necessary capital for the extension and re-

construction is then obtained through the sale of securities of the new corporation, and the whole undertaking comes to the investing public as a new promotion.

The estimates of the profits to be realized and the new capital needed in such cases, when carefully made by engineers experienced in the public utility business, are often very accurate and are the most reliable offered to the investor in any form of promotion. Great care must be exercised, however, that estimates be not overstated. A reputation for conservatism in his estimates is of great value to any such promoter who seeks aid from bankers.

**Money Investment Required.**—Of great importance, too, in determining the banker's indorsement and the form of the financial plan, is the money investment required to acquire and develop the property. As stated before, the majority of small gas and electric light companies were built by local business men and their promotion follows no ordinary lines. They are purely local enterprises in management and ownership. It is only when these local enterprises are acquired by outside interests and the capital for them shifts into regular investment channels that they assume importance from the point of view of general finance. These local, unprogressive, and quite often unprofitable enterprises must be paid for by bankers who undertake the financing of the promotion. Fixing the purchase price is one of the objects of the negotiations undertaken by the promoters. Once this price is agreed upon, it becomes an ever-present element in determining the character and the amount of the new securities to be issued.

In spite of the inexactitude and differences of method in the physical valuation of water, gas, and electric companies, there is surprising uniformity in the judgment of values made by buyers of public utility properties. Their price is not a matter of physical valuation, but of earnings and "possibilities,"

as the future opportunities for development are called. If the territory is developed to such an extent that the company has about as many customers as the population would warrant, and the equipment is in fair condition, neither new nor so antiquated as to be useless, one may say roughly that the price promoters are willing to pay is ten times the net earnings. That is, given a small local company operating under average conditions, a typical case, outside bankers and engineers will be willing to purchase the property for an amount equal approximately to ten times its normal earning capacity. This is spoken of as a "10 per cent basis," meaning that the capital value is such that the earnings are 10 per cent of it. However, within recent years both bankers and promoters have been forced to recognize that, for the purpose of estimating future earnings, the value of a public utility is no greater than that allowed by rate-making commissions. A recent report of the Committee on Public Service Corporations of the Investment Bankers Association states that commissions have usually reached the conclusion that a public utility should earn about one-twelfth of its value each year.

Such simple values are, however, subject to certain modifications, the most important of which is the economic background of the community served by the utility. Attention has been drawn already to the fact that communities may be arranged in a kind of economic life cycle, from the ascending vigor of youth to the descending decay of old age. Wires and mains are worth little in a community of vacant houses, closed factories, and abandoned farms. On the other hand, the mere privilege of doing business, attested by an antiquated and dilapidated plant, may be worth a large amount although the accounts show an operating deficit.

**Economic Stability.**—The banker will be influenced, too, by the economic background of the community. A large



manufacturing industry very much improves the economic stability of the region; but in a "single-industry" town the prosperity fluctuates too much with the prosperity of the industry. A group of small diversified manufacturing industries employing highly skilled men affords the best possible field for the local utility. Generally speaking, the nearer the industries are to the basic process of manufacture—in the sense that the furnace man is basic to the steelmaker, and the steelmaker to the bridge-builder—the stronger will be the economic stability of the locality. If the industries are directly connected with some monopolistic source of raw material, as Duluth-Superior is allied with the Lake Superior iron mines, the prosperity of the town must be judged in terms of the prosperity of its fundamental industry. All things considered, the community with a wide diversity of manufacturing industries, surrounded by a considerable area of diversified farming lands, shows the highest degree of economic stability. And the accuracy and reliability of bankers' predictions of future earnings will depend upon this economic stability.

**The Financial Plan.**—Granting that the local utility or group of utilities will cost the promoter-engineer ten times the net earnings of the previous year, and that his estimates of future earnings are sufficiently sound to interest his banker in the enterprise, the next step to consider is the financial plan, which the two will formulate together. The new corporation will take over the physical property, franchises, and privileges of the old utilities. Two limiting considerations will determine the proportion of bonds and stocks to be issued and their absolute amounts—the ease with which the banker can sell the securities to the public, and the actual amount of money that must be raised—for the banker is confronted with the stern necessity of selling the securities in competition with those of other bankers and they must be attractive.

The first matter to be considered is the kind of securities, the second their relative and absolute amount. Public utilities differ among themselves in the extent to which their earnings are affected by general business conditions. The relative constancy is inverse to the elasticity of the demand for the commodity supplied. Water company earnings are least fluctuating, then gas, then steam electric, and finally those of hydroelectric developments with a considerable power load. But the earnings of public utility enterprises are on the whole remarkably constant, neither abnormally high in times of business "boom" nor abnormally low in times of business depression. There is therefore no reason to fear that a reasonable load of fixed charges will precipitate bankruptcy. This being true it will be expedient to issue at the outset a certain amount of bonds, since a part of the money may be secured more cheaply through bonds than through the sale of stocks alone. In accordance with the investment habits and prejudices of the period immediately before the Great War—which we may consider normal—a high-grade first mortgage public utility bond would be bought by the investor at a price to yield him between 5 and  $5\frac{1}{2}$  per cent, whereas he would not buy a high-grade preferred stock of a new company on less than a  $6\frac{1}{2}$  or 7 per cent investment return.

**Amount of Bonds Issued.**—If the bonds are to be issued the amount must be small; the interest upon them must be only a moderate proportion of the past earnings or of the prospective future earnings. While there is no invariable principle, the conservative banker in protecting his customers will insist that the interest charges on the bonds proposed by the financial plan shall be not more than one-half the amount of the current net earnings after making reasonable allowance for depreciation and obsolescence. Such bonds he can sell without much difficulty, provided the general bond market is

favorable, and provided he can conscientiously recommend them to conservative investors. And the observance of this principle is wise financial practice on the part of the promoters of the new enterprise, for it would be distinctly inexpedient for the corporation to assume a fixed bond interest charge of more than half its assured earning capacity.

Granting that the old companies were bought on a "10 per cent basis," it is clear that, were it possible for the company to realize the par value of 5 per cent bonds, exactly enough money would be supplied to pay for the old properties. But the par value of 5 per cent bonds cannot be realized; the investor will not ordinarily pay 100 for the 5 per cent bonds of a new utility, the banker must have a profit for the sale of the bonds, and the new company must be provided with money to pay for the improvements and extensions necessary to rehabilitate the old plants. For such things, other securities inferior in character must be sold to supply the additional money. These may be short-time notes, shares of preferred stock, or even common stock.

**Notes and Preferred Stocks.**—As a general rule, notes should not be issued at the time of a public utility promotion. They must be refunded into bonds or stocks within a short time. Unlike a manufacturing business, the assets of a public utility are almost entirely fixed and not readily available for meeting a rapidly maturing debt. In unusual cases when the company has been so ill-managed during the preceding year that the past earnings give little indication of what can be accomplished by the aid of efficient engineers, it may be wise to issue 2- or 3-year notes. If that is done no preferred stock need be sold until the net earnings shall have so improved as to enable the company to sell it for a fair price. Such note issues are, in effect, merely temporary financial expedients and should be employed only when there is a reasonable certainty that the

net earnings will be increased immediately by leaps and bounds. As few newly promoted companies can be assumed to develop greatly increased earning capacity immediately, the issue of preferred stock should be the almost universal rule, and the issue of notes the rare exception.

The preferred stock of a new public utility that has been preceded by a senior issue of bonds will be offered by the banker as a kind of "conservative speculation." It should appeal to that class of investors only who, either from ignorance or well-reasoned judgment—it is often difficult to say which—are tempted to sacrifice safety for the promise of large returns. The promised dividend must be made high to attract this class. Custom fixed it before the Great War at either 6 or 7 per cent, according to the standing of the interests behind the promotion or the geographical location of the public utility company; the financial plan must conform to this custom. To sell the preferred shares to even the speculative investor, the margin available, after the deduction of bond interest from the current earnings, from which to pay the dividends, must be at least twice the dividend requirements; that is, to phrase it a little differently, an issue of preferred stock following a prior issue of bonds must be limited to such an amount that the promised dividend upon it shall be no more than half the margin of net earnings left after the deduction of the bond interest. The issue of preferred stock beyond this amount is not sound finance, but if the old properties entering into the new company have been acquired at reasonable prices and are not too dilapidated or obsolete the sale of this amount of preferred stock will be ample to absorb the discount on the bonds and supply the company with money for the improvements of the first year.

**Issue of Common Stock.**—As in the case of manufacturing companies, there is no principle governing the issue of common

stock, other than that the financial plan should appear well balanced. Most or all of such stock passes directly to the promoters, underwriters, and bankers, as the profit of the promotion. The total amount, therefore, is merely an arbitrary matter of bookkeeping, having but slight influence on the future success of the company. Even the question of keeping the control of the majority of voting shares in order to control the management will not be vital. The public to whom such securities appeal has no inclination to interfere with a successful and experienced management which is, apparently, working for the best interest of the common shareholder.

**Bankers' Commissions.**—As the risk in the enterprise is less, so the commission exacted by the banking house will be less than with manufacturing companies. The following table compiled from a study of actual sales in the period before the Great War shows the rating of the risk and the commissions or gross profit obtained by bankers directly from the sale of public utility promotion securities directly to the public.

	Number of Cases	Gross Profit in Dol- lars per \$1,000 Bond or Par Value of Stock
New closed or very carefully restricted gas and electric light operating company bonds (distinctly the best of their class) .....	16	\$53.65
Refunding and new large open-end issues of public service holding companies (medium and low-grade public utility bonds) .....	12	67.80
Preferred stocks of gas and electric light operating companies .....	16	76.35
Preferred stocks of public service hold- ing companies (initial issues when it is possible either to eliminate or evaluate the common stock bonus) .....	9	93.50

**Human Factors in Promotion.**—Any summary statements of customary and standard methods of promoting a new public utility, or for that matter a manufacturing plant or a railroad, such as this chapter presents, leaves out of account the element of the human equation. This delays, complicates, clogs, and racks the proceedings attending the birth of any corporation. Every promotion will have strong dramatic moments. Men are playing against each other for large stakes, and the players are usually men of dominating personalities and unyielding wills. Often the long and otherwise monotonous course of the negotiations leading up to the final plan of promotion is one continuous conflict of human emotions, passions, and ambitions—not always based on economic growth, for men will make large pecuniary sacrifices in order to defeat the purposes of another or pamper some motive of personal pride or vanity.

The account appended here is not fiction but on the contrary an accurate report of an actual promotion, except that names and unimportant details are altered to prevent identification.

Through a curb broker, a man by the name of Richards was introduced to two promoters, Roe and Doe, who had acquired through the payment of a sum of money, two-thirds of it borrowed, the "contract of sale" of a public utility in a thriving eastern industrial city. The price called for was \$800,000, and in addition \$300,000 had to be raised at the same time for the construction of a new central power station, as the old station was obsolete beyond rejuvenation.

The curb broker, Roe, and Doe, then went through the preliminary forms of organizing a corporation with \$2,000,000 bonds and \$2,000,000 common stock. The curb broker had arranged with Roe and Doe, by a verbal understanding, to find investment bankers who would supply the money through the purchase of bonds and a relatively small stock bonus. The

curb broker was to receive 2 per cent commission on the bonds issued and \$60,000 par value in common stock. Richards introduced Roe and Doe to Smith and Peters, investment bankers. The curb broker had nothing further to do with the promotion, the negotiations taking place between the promoters and the bankers, with Richards acting as the ostensible intermediary, but actually as the accredited representative of the bankers.

The following were the successive plans:

1. July 27. Proposed by promoters: Bonds, \$1,400,000, to be bought by bankers at 85; common stock, \$2,000,000—bankers to have \$400,000, the remainder to promoters; refused categorically by bankers.

2. August 17. Proposed by promoters: Bonds, \$1,000,000 to be bought by bankers at 85; preferred stock, \$400,000, to be taken by promoters at 80; common stock, \$2,000,000, to be divided as follows: \$1,000,000 to promoters, \$400,000 bonus to public buyers of preferred stock, \$200,000 bonus to certain other unnamed parties who had advanced money to promoters, \$400,000 bonus to bankers; refused by bankers with the comment that they "were interested."

3. August 24. Richards, Smith, and Peters, and an expert engineer visited the properties with Roe and Doe. Bankers stated to promoters that they would "go into" the proposition provided: (a) the conditions of incorporation and mortgage lien were satisfactory; (b) only \$680,000 of bonds to be issued in the first instance; (c) bankers receive reasonable allotment of common stock; (d) promoters assume responsibility for sale of preferred stock. These tentative terms accepted by promoters.

4. September 2. Proposed by bankers: Bonds, \$800,000, to be bought by bankers at 83; preferred stock, \$400,000, to be bought by promoters at par; common stock, \$2,000,000, to be divided as follows: \$400,000 bonus to public buyers of

preferred stock, \$200,000 commissions to various parties, including bankers and attorneys, \$700,000 to promoters, \$700,000 to bankers; refused by promoters.

5. September 4. Smith, Richards, and the promoters meet in a New York hotel and effect the following compromise agreement: Notes for \$320,000; bankers agreed to secure loans on these notes on behalf of company, but payment of these loans to be guaranteed to bankers by promoters. Bonds, \$800,000, but there was to be issued and bought by the bankers at 83 only enough to provide, with the proceeds of the loans and preferred stock sale, the \$1,100,000 required to pay for the plant and new power station. Preferred stock, \$400,000, to be bought by promoters at 83. The proceeds of the loans and the sale of sufficient of the bonds and all the preferred stock to be paid in immediately to complete payment for property. Common stock, \$2,200,000, to be divided as follows: \$200,000 commissions to various parties, including bankers and attorneys; \$900,000 to bankers; \$1,100,000 to promoters.

6. September 15. Promoters inform bankers that they cannot feel sure that they can have the proceeds of the sale of the preferred stock ready to pay down at the time the bankers' money is available to take over the property. As promoters had signed previous agreement A [(5), September 4], it was a virtual repudiation of their contract. Bankers then say that plan must be readjusted. Bankers propose that afternoon the following plan, which is accepted by promoters tentatively: Bonds, \$680,000, to be sold to bankers at 86, less commission of 3 per cent. Notes, \$265,600; note of company to be negotiated and indorsed by bankers. Preferred stock, \$400,000, divided as follows: \$200,000 to the promoters, to be paid for at 83, at the time of the formation of the company; \$200,000 to be used as collateral by promoters under a guaranty to bankers or company that promoters buy and pay for it outright within 30 days. Common stock, \$2,200,000,



to be divided as follows: \$200,000 commissions, \$1,000,000 to bankers, \$1,000,000 to promoters.

7. September 21. Promoters state that they will not sell preferred stock. Bankers then insist on readjustment of plan. They propose new plan which is accepted by promoters, and a formal agreement is drawn up. Bonds, \$680,000, to be bought by bankers at 86 per cent, less commission of 3 per cent, in the form of company notes. Notes of \$265,600 negotiated by bankers. Preferred stock, \$400,000, to be divided as follows: \$188,000 taken by promoters at 83; \$212,000 used by bankers as collateral for loans, but under guaranty that promoters will sell stock at 85 in 30 days. Common stock, \$2,200,000, divided as follows: \$180,000 commission to bankers, attorneys, etc.; \$400,000 fund to be used as bonuses in selling other securities of company; \$410,000 to promoters immediately; \$240,000 to promoters after selling remainder of preferred stock; \$870,000 to bankers.

October 3. Promoters repudiate plan, after they have analyzed it and come to realize that control passes to bankers. Promoters become very angry, as they begin to realize that Smith and Peters will not furnish the money and take the risk, while they, the promoters, reap the major part of the profits. A heated meeting occurs at which Roe accuses Richards of plotting to rob him of the property. Roe calls Richards a "d—— black-whiskered Jew!"

Roe and Doe begin negotiations with other bankers, notwithstanding their agreement of September 21 with Smith and Peters.

October 9. Smith and Peters hear indirectly of these other negotiations and, through questioning of Doe, learn the details.

October 11. Smith and Peters telegraph the other bankers that Roe and Doe have a contract with them for the promotion of the project, and that if the other bankers interfere, Smith and Peters will hold them liable for breach of the contract.

Roe, who is shown the telegram, flies into a rage and the other bankers withdraw.

October 13. Roe accuses Doe of playing false in allowing Smith and Peters to discover Roe's double dealing. The two exchange heated accusations, and Doe says he is going to withdraw from the whole promotion if he can get back the money he has put in. (Roe had put in \$40,000 of borrowed money—nothing of his own—and Doe, \$20,000 of his own money as partial payments on the property. Doe had also paid preliminary expenses to the amount of \$12,000.)

October 15. Doe tells Smith and Peters that he is "sick of the whole thing" and suggests that Smith and Peters buy out the interest of the promoters and take over the whole enterprise themselves.

8. October 17. Promoters offer to sell their interests in the project, on which they had \$60,000, to the bankers for \$90,000. Bankers refuse.

October 17 (Later in day). Bankers intimate that they will accept responsibility for the promotion and buy interest of promoters, provided latter will take part payment in securities. Promoters forced to admit that their direct investment is only \$60,000, of which \$40,000 was borrowed on the promise that it would be returned immediately on consummation of promotion. Lender was to receive in addition a common stock bonus. (One of the unnamed parties mentioned under plan two, August 17.)

9. October 19. Bankers, after consultation with two associates, who agree to participate with them in the undertaking, make the following offer: They will organize a company with the following capitalization:

Bonds.....	\$ 680,000	5% First mortgage
Notes.....	440,000	6% Second mortgage
Preferred stock.....	240,000	6% Cumulative
Common stock.....	1,100,000	

They agree to assume the original contract and pay the balance of \$740,000 (the promoters had, as stated above, paid down \$60,000, of which \$40,000 was borrowed by Roe and \$20,000 furnished by Doe) and raise the \$300,000 necessary for the construction of the new plant. They offered Roe \$40,000 in money to enable him to make restitution, and \$50,000 in common stock, out of which he must settle with the party from whom he borrowed on the promise of a common stock bonus. They offered Doe \$20,000 in money to reimburse him for the money he had advanced on the purchase contract, \$12,000 in the 6 per cent notes of the new company to repay him for his expenses, and \$50,000 in common stock. The bankers also agreed to settle with the attorney of the promoters and their general utility man by the payment of \$8,000 in 6 per cent notes of the new company, and \$40,000 in common stock. Bankers gave the promoters until 12 midnight the following day to accept or reject the proposition.

Doe accepted immediately.

Roe accepted, after numerous plays and counterplays, five minutes before midnight.

As an aftermath, Roe threatened to shoot Richards, whom he blamed for aiding and abetting the bankers.

November 10. The curb broker threatened to bring suit against Smith and Peters for a commission. Smith and Peters told them to go ahead. (Suit was not brought because the curb broker had quarreled with his partner, necessarily a party in the suit, over a woman stenographer.) They could have probably maintained a suit against Roe and Doe, for whom they were acting in bringing Richards into the matter, but they recognized that, even if successful, they could recover nothing.

## CHAPTER X

### THE UNDERWRITING SYNDICATE

**The Syndicate and Distribution of Securities.**—In these various discussions of different types of promotions, the ability of the banker to distribute the securities of the new enterprise has been assumed. It seemed simpler from the point of view of exposition to consider the steps leading to the promotion of the corporation as distinct from the selling of its securities, yet in reality the two are closely allied. No banker will waste his time or energy over a plan of promotion unless he feels that he can sell its stocks and bonds. And the possibility of marketing the security is almost the first question he must settle in his own mind before entering into negotiation with the promoter of a new project. Nevertheless the machinery by which all securities, whether stocks or bonds, whether the securities of new or old enterprises, whether those of industrials, railroads, or public utilities, are sold is so essentially the same that merely from the standpoint of clearness, it seemed wise to treat of the whole subject of syndicate underwriting separately.

The general work of the bond house in catering to the needs and whims of the public investor has been described briefly in the closing sections of the chapter on the work of the banker. But intermediate between the actual purchase of securities by the investment banker and their sale to the public there stands a very important cog in the machinery. It is the underwriting syndicate. It is used in the distribution of all types of securities, high and low grade, and in the distribution of the issues of old well-established enterprises quite as much as those of promotion projects.

No one banker will care to assume the risk of buying and

selling an entire issue of securities, whatsoever the nature of the enterprise. Aside from a reasonable desire to distribute his capital and the risks of his business in many directions, his own customers possess only a limited capacity to buy any one issue of bonds or stocks. He must have many different issues to meet their varied needs, but not too much of any one issue. Accordingly he secures the co-operation of other bankers who agree to share with him the risks, and very often the selling, of the securities he contracts to buy from the corporation.

**Introduction into the United States.**—The custom of forming temporary associations for the sale of securities was introduced into this country by Jay Cooke in 1871. He was then engaged in the task of refunding United States bonds. Cooke had noted with considerable care the operation of the French “syndicate” while on a visit to France, and conceived of the use of a similar instrument in distributing American securities here. While used considerably during the period from 1880 to 1890 in the sale of railroad bonds, the American underwriting syndicate did not occasion general note or become an important step in financial procedure until the second period of industrial promotions. This began in 1897. Since then the underwriting syndicate has been used in large and small undertakings in all fields of promotion. In fact, it may be said without exaggeration that there are no promotions of any considerable size and very few sales of large blocks of securities by corporations that have not been accompanied by some kind of an underwriting syndicate.

**Assumption of Risk.**—The form and structure, the legal and moral responsibility, and the general operation of a syndicate organized in connection with the sale of promotion securities may differ in no wise from the corresponding char-

acteristics of one organized to distribute an issue of bonds or stocks of an old-established corporation, though the profits will be greater in the former case. The main point is that it is a usual, but not a necessary, intermediate step, interpolated between the issue of securities by the corporation and their final absorption by investors and investment institutions.

As no two underwriting syndicates are of exactly the same form and, owing to the complex relationship of the various parties of the underwriting agreement, a classification of them is exceedingly difficult. The principle behind them all is that a group of bankers stand together to assume the risks of failure or success and virtually insure against the failure of any issue of securities by promising to take themselves at a fixed price any left over after a general public offering. In order to make the whole procedure clear several different types of syndicates will be described.

**Simplest Form of Syndicate.**—A syndicate for underwriting the bonds of a small hydroelectric promotion well illustrates perhaps the simplest form. The total actual cost of river rights, flowage basin, the money construction cost of the dam, and two transmission systems to adjacent cities, together with the transforming and distribution systems in these cities, was \$1,128,000 in actual money.

This entire cost was met by means of the sale to banks of notes indorsed by the investment bankers who proposed to stand back of the enterprise—we will call them Smith and Company. When the development was finished and the company in actual operation Smith and Company formed an underwriting syndicate to help carry the financial burden of the enterprise. Before they did this, however, the Assinippi Electric Company, as the entire development may be called, issued the following securities:

	Authorized	Issued
First mortgage bonds (5%).....	\$ 3,000,000	\$1,000,000
Preferred stock (7%).....	1,000,000	437,500
Common stock.....	10,000,000	4,000,000

Smith and Company then sent to four of their associates in other cities an "offer of participation" in the Assinippi Electric Company's first mortgage bond syndicate. This offer of participation set forth in detail the nature of the enterprise, its financial plan, and the details of the syndicate operation, so far as these could be anticipated. Each of the four answered that they would accept a participation in the syndicate and specified the amounts.

Smith and Company subsequently sent to their four associates a formal contract or participation agreement. Such a document is known always as the "syndicate agreement." It contained, among others, five provisions to be found in all syndicate agreements of this general character. There was, first, a statement of the purpose for which the syndicate was organized—in this case the acquisition of the \$1,000,000 of the first mortgage bonds of the Assinippi Electric Company. Secondly, a statement of the price at which the bonds were to be acquired on syndicate account—in this case 80 per cent of par value, in addition to which the syndicate was to receive \$1,000,000 par value of the common stock. Thirdly, a clear statement of the terms under which Smith and Company were to manage the syndicate, their compensation and the conditions under which it should be paid—in this case 2 per cent for each bond sold on syndicate account, provided a price of 85 per cent was obtained for the bonds. Fourthly, a statement of the conditions under which the securities acquired by the syndicate should be sold—in this case not less than 85 per cent if sold within 18 months, and if at the end of that time the bonds had not been entirely distributed the manager agreed to secure the consent of all the underwriters before offering the bonds

at a lower price. And lastly, a statement of the amount of subscription or "underwriting" assumed by each of the bankers. In this case the managers themselves participated to the amount of \$400,000 of the \$1,000,000 of bonds, another banker to \$100,000, and the other two to \$250,000 each, thus completing the entire amount.

These five elements are to be found in every underwriting syndicate agreement in which the manager undertakes to superintend the marketing of the securities. In most instances also there are numerous other stipulations which are peculiar to the circumstances of the underwriting. The syndicate agreement may specify among other things, whether or not the participations may be transferred, at what time and under what conditions payments are to be made by the participating members, whether or not the manager has the right to buy and sell all the syndicate securities or to hypothecate them, whether the syndicate itself or the manager shall bear the direct expenses of the sale if such are incurred, and a host of other details that might lead to dispute. The syndicate members may be large wholesale bond houses who do not undertake to reach the single investor. In the case of the Assinippi bond syndicate just described the managers, Smith and Company, sold the bonds 14 months later, at 88½, to a "bond house," or merchandise investment banker with many branch offices and a large selling organization designed to reach small investors. These last paid 94 for the bonds some two months afterward. Besides the money profit the syndicate realized a considerable profit through the ultimate disposal of its common stock bonus.

**An Unsuccessful Syndicate.**—Not all syndicates are successful, as the following case shows. In 1902, prominent financial interests in New York promoted a consolidation of real estate building and owning companies, known as the



United States Realty and Construction Company. The promoters, having been impressed with the speculative enhancement of New York realty values, wished to obtain a large fund of ready money which could be used in building construction and speculative ventures. Some of the best known and ablest financiers of the country were led to lend their financial and moral support to the enterprise. Mainly through the efforts of James Stillman, of the National City Bank, a syndicate was organized to supply \$11,000,000 in money to the new company. The syndicate received \$11,000,000 in the preferred stock and \$11,000,000 in the common stock of the United States Realty and Construction Company in return for the money. Of the \$11,000,000 subscribed by the members of the syndicate, 20 per cent was immediately paid in money, 60 per cent was paid by their notes, and banks arranged to carry the remaining 20 per cent in the form of a loan, the syndicate securities being used as collateral. So popular and, in the past, so profitable had the underwriting of new industrial promotions proved to be, that the right to subscribe to the syndicate was looked upon as a privilege. A financial journal of New York stated that "nearly every important financial interest in this city" subscribed to the syndicate. The number included the Equitable and New York Life Insurance companies, the National City and other prominent banks and trust companies. Messrs. Hallgarten and Company acted as managers, receiving for their services 2 per cent of the total subscriptions, or \$220,000.

Just a year after its formation the syndicate was liquidated. During the period of its duration the manager had bought and sold both the preferred and common stocks of the United States Realty and Construction Company and had collected approximately \$500,000 in dividends. As a result of these operations the subscribers to the syndicate received for each \$1,000 of original subscription, \$1,155 par value in preferred stock, \$702 par value in common stock, and \$16.66 in money.

These securities had, on the day the syndicate was liquidated, a value, including the money, of \$523.09 for each \$1,000 original subscription, or approximately one-half what had been subscribed the year before. If the interest on the subscription should be deducted, the returns to the members of the syndicate were actually less than one-half the original subscription.

**"Selling Syndicates."**—In another type of syndicate the entire work of selling is assumed by the participating subscribers themselves. This is the usual means of distributing small issues among investment banking houses, each one of whom is expected to exert itself in selling the securities among its own clients. And it is from membership in these "selling syndicates," as they are sometimes called, that the small investment bankers all over the country get the securities they offer their customers.<sup>1</sup>

In detail, this type is excellently illustrated by the bond-selling syndicate of the Western Light and Power Company. This company was the result of a reorganization of the old Northern Colorado Power Company in which the Westinghouse interests had a considerable amount of money tied up. The reorganized company issued \$2,100,000 first mortgage

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<sup>1</sup> The following letter is a typical form of an "offer of participation" sent by the wholesaler, who acts as the syndicate manager, to small dealers all over the country:

Confidential

MONONGAHELA VALLEY TRACTION COMPANY  
General Mortgage 7 Per cent Five-Year Gold Bonds

New York, August 30, 1918.

Messrs. Hopkins, Eldridge & Company  
Philadelphia, Penn.

Dear Sir:

We and our associates are arranging the purchase of \$5,500,000 MONONGAHELA VALLEY TRACTION COMPANY General Mortgage 7 Per Cent Five-Year Gold Bonds, dated July 1, 1918, and due July 1, 1923, and we are forming a selling syndicate in which we shall participate, to take over these Bonds at 94 and accrued interest, when, as and if issued and received by us. It is expected that definitive bonds will be ready for delivery about September 12th.

The list offering price of these Bonds, subject to change at our discretion without notice, shall be 97 and accrued interest. Syndicate members will be allowed a selling commission of 1½ per cent of their confirmed sales, out of which selling commission they may allow ¼ of 1 per cent to financial institutions and ½ of 1 per cent to other dealers and banks with bona fide bond departments. You may begin offering bonds on Tuesday, September 3, 1918.

10-year 5 per cent bonds on May 1, 1915. No attempt was made to sell these bonds until the late winter, when the banking house of William Morris Imbrie and Company arranged and became the managers of a selling syndicate organized to distribute the bonds among investors. This syndicate agreement, reproduced in the form of a letter, as given below, contains features unknown in syndicate underwriting until recently. One of the most important of these new features was the privilege extended to the participants to buy the bonds outright of the syndicate, and extinguish thereby their liability.

WILLIAM MORRIS IMBRIE AND COMPANY

61 Broadway

New York

\$2,100,000

WESTERN LIGHT AND POWER COMPANY FIRST MORTGAGE 5 PER  
CENT 10-YEAR GOLD BONDS SYNDICATE

Gentlemen:

We confirm your participation of.....bonds in the above syndicate at the price of 87 and interest. This syndicate will expire December 28, 1915, unless sooner terminated by ourselves as Syndi-

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All sales shall be subject to confirmation by us and for syndicate account.

Members shall share pro rata in the profits or losses, after allowing for syndicate expenses. The syndicate will expire at the close of business October 31, 1918, unless sooner terminated by us. We reserve the right to extend the syndicate an additional period or periods, such extension not to exceed in the aggregate 30 days.

We shall have sole direction of the syndicate, with full powers, and will make no charge for our service in this connection, as the price above named includes a profit to us. We may, in our discretion, purchase and resell bonds for syndicate account in such amounts and at such prices as we may deem advisable, and should any bonds remain unsold upon the termination of the syndicate, we may sell such bonds upon such terms as we deem advisable, to any person or syndicate, and we may participate in any such purchase.

We enclose herewith several preliminary circulars for your use and will provide promptly as many more as you may need, carrying your imprint, if you will advise us.

We are pleased to offer you a participation of \$50,000. This participation shall not be transferred or subdivided.

Kindly advise us of the acceptance of your participation on the terms stated, by wire, and confirm by letter. We reserve the right to close the participation list at any time without notice.

Yours very truly,

THE NATIONAL CITY COMPANY,

By H. B. BAKER,

Vice-President.

cate Managers, all the bonds having been sold. The Syndicate Managers reserve the right to extend the syndicate for sixty (60) days.

The offering price of the bonds will be  $92\frac{1}{2}$  and interest. Syndicate members will be allowed  $2\frac{1}{2}$  per cent commission on sales made for syndicate account. A commission of 1 per cent may be allowed to investment dealers or banks with bona fide bond departments, this commission to be a part of the  $2\frac{1}{2}$  per cent commission allowed to participants. We reserve the right, however, to sell large blocks at a very large concession from this figure, and would be glad to have you advise us if you have anyone interested in such blocks. Participants shall be responsible for their numbers during the life of the syndicate, and the Syndicate Managers reserve the right to make a market on the bid side of  $91\frac{1}{2}$  per cent during the life of the syndicate.

Each syndicate member as he sells bonds for the account of the syndicate reduces his syndicate liability to that extent. In other words, a participant will not be called upon to take up at the termination of the syndicate unsold bonds to an extent greater than the difference between the amount of his participation and the bonds sold by him. Arrangements have been made for the carrying of these bonds during the life of the syndicate.

Definitive bonds are now ready for delivery. As soon as proof circulars are received, a quantity of same will be forwarded to you. Kindly advise us how many circulars you will need with your imprint thereon, and forward us your imprint showing the way you desire them printed.

General circularization will take place on or about Monday night, November 29, and the bonds will be offered publicly by advertisement on or about Wednesday, December 8. These dates are subject to change, and you will be advised definitely later with reference to them.

Syndicate expenses will be ratably shared by the participants, but in no event will they exceed a quarter of 1 per cent of the par value of the bonds syndicated.

If you care to withdraw your participation, you are at liberty to do so at  $87\frac{3}{4}$ , which is the syndicate price plus  $\frac{3}{4}$  per cent for syndicate commissions. It is understood, however, that in case of withdrawal you will still keep to all of the selling terms of the syndicate, the same as though your bonds were being carried for syndicate accounts.

Kindly confirm your acceptance of the above participation, and

advise us how many, if any, of these bonds you wish to take up at the present time.

Yours very truly,

Offer of participation in this syndicate was made by the following letter :

November 28, 1915.

Messrs. Brown, Green and Company,  
New Orleans, Louisiana.

Dear Sirs :

As discussed with your Mr. Green over the telephone this morning, we are forming a syndicate on Western Light & Power First Mortgage 5% Bonds of 1925, and enclose herewith a confidential syndicate memorandum, together with a copy of the syndicate agreement concerning this issue. We offer you a participation of \$250,000 of this issue according to the terms set forth in the agreement enclosed herewith, and we might consider giving you the exclusive southern territory, excepting Messrs. Jones, Seagraves and Company, who are already in the business with us. For an amount of participation less than the one mentioned, we would not care to give you the exclusive right to offer this issue in that section.

We wish to suggest in connection with the terms mentioned in the Syndicate Agreement, that in some cases we have allowed participants to withdraw their total allotment immediately upon the payment of  $87\frac{1}{4}$  and interest for the bonds, thus being able to immediately realize their entire profit. We have added in these cases to the price of 87 mentioned in the Agreement  $\frac{1}{4}$  of 1%, as being a fair amount for syndicate expenses. We merely mention this in passing, since, if you are interested in this business, it is an item you will undoubtedly care to know about.

You will find, after reading the memorandum which we are sending you, that we are offering you a participation in some business in a first mortgage bond issue with only  $9\frac{1}{2}$  years to run, which will be retailed to the public at  $92\frac{1}{2}$ , or a 6.05% basis, a bond which is a mortgage on a property earning twice the interest requirements, and operated by the Electric Properties Company.

Westinghouse, Church, Kerr and Company, well-known engineers, have made an exhaustive report on this property for us, the books and

accounts have been audited by Messrs. Price, Waterhouse and Company, and the legality of the issue has been passed upon by Messrs. Cravath and Henderson.

We feel that a first mortgage bond earning over twice its interest charges, which can be offered to the public on better than a 6% basis, with a profit of 5½ points to the selling syndicate, is particularly attractive business from all standpoints, and we shall be glad to have you come along with us. The business is new, the bonds never having been offered, and we are beginning to form our syndicate.

We have purposely offered our syndicate participations in this business in the west before approaching our New York friends, since this is a western issue, and we are pleased to report that we have confirmed participations in Chicago to the Bond Department of one of the largest National Banks, two of the better class of local bond houses, and, in addition, two of the large Trust Companies are actively negotiating and will undoubtedly come in. We have in Colorado three of the best dealers, and we are today negotiating with prominent dealers in Cleveland, St. Louis, and Milwaukee.

We therefore anticipate that this issue of bonds will move rapidly, and request that if it is of interest to you, you communicate with our Mr. ——— over the telephone and advise us as to what interest you may have in the matter at your early convenience.

We are, dear sirs,

Yours very truly,

**Arrangements for Carrying the Issue.**—Incidental to the assumption of risk is the task of supplying money with which to carry the securities until such time as it is expedient to sell them. Generally, except when the syndicate acts for large corporations as an insurance medium only, its manager must pay for the securities before they can be marketed, either wholly or in part. A considerable sum of money is usually tied up. Sometimes the corporation selling them will lend its credit, sometimes the manager will use his own credit, but much more frequently the manager seeks to negotiate loans with a trust company which expects a "commission," or an abnormally high rate of interest—whichever way the transaction is

regarded—for its help. These are known as “syndicate loans.” Seldom is the trust company willing to advance the entire amount required by the syndicate to complete its purchase of securities, but through the aid of these loans it is frequently possible for the manager to avoid tying up his own funds or those of the participants to the extent of more than a quarter of the total money involved.

In spite of the difference in actual detail, all these cases show clearly that the assumption of the risks incident to the sale of securities is the fundamental and essential characteristic of all underwriting syndicates. It is their social and economic service as well. Participated in, for the most part, by banking houses controlled by men conversant with financial values, who gauge more accurately than the public the worth of new enterprises, there is less likelihood of industrial failure and waste of public funds than if the attempt were made to distribute the securities directly to the public.

## CHAPTER XI

### THE IMPORTANCE OF ACCOUNTING

**Need for Science of Accounting.**—The big business with its several types of obligations introduces more specific problems of management and financial policy than any man or group of men can hold in their minds at once, or “feel their way along” in. And when the outside investor comes to question the wisdom of the managements under whose control his investment falls he needs to have the relationships of income, expenditure, property and debts, and condition of plant made clear and exact. The managers of corporations need the help of exact figures to discriminate between different costs and different ways of marketing their products.

Out of such needs the science of accounting has risen. You cannot tell at a glance the condition of a business enterprise as you can examine a building or a gasoline engine, because all values of a going business must be computed indirectly. At the time of promotion there may have been a correspondence between the value and the cost of the property acquired by the new corporation, but no sooner is the business under way than changes in the value of its property necessarily occur.

**Purpose of Accountancy.**—Accountancy, in practice, seeks to place a money value on every form of value used in business. It then sums up the changes in the aggregate money values of any one business involved in the buying and selling of its stock of goods, the decay of its buildings, the growth in popularity of its trade-brands, the obsolescence of its machinery, and the countless other changes which occur in the ordinary course of the operation of any business enterprise. The managers must



know of these changes in terms of the corresponding money values, that they may determine whether or not the business is a success and at what points are its weaknesses and its strengths. Investors must have the facts and figures to enable them to go below the immediate signs of prosperity, such as dividend payments and stock market quotations, to enable them to judge of the real soundness of their investments.

Business success is shown by an increase in money value. This increase is the profit. Part of the profit may be withdrawn for the private use of the proprietors and part should be retained in the business as invested surplus, or specifically labeled as "reserves." In all this computation of profits and the amount to be withdrawn from the business, the principles governing the determination of the true money equivalent of the property values of the business at various times are of paramount importance. These principles are the science of accountancy, the science of reducing the condition of a business to the value of what it owns and what it owes.

**The Balance Sheet and the Income Account.**—Accountancy leads to two modes of representing a business enterprise. One is the correspondence between the money value and the economic value of a business at any one moment of time. It is a statement of the money equivalent of the business—its net worth. In familiar terms, it is the balance sheet. The other mode of representation is a statement of the steps by which the money equivalent or balance sheet of a business at one moment of time is changed into another money equivalent at a later moment of time. It is the general income account, embodying all the increases or decreases in economic value sustained by the business during the time intervening between two balance sheets.

The balance sheet should express, so far as figures permit, the wealth represented by a business at any one moment of time. This wealth is in various forms, representing not only

property actually in hand but also the rights to receive property in the hands of others at the precise time represented by the balance sheet. In addition, persons outside of the business probably have rights against it, represented by property being used by it. It is impossible, therefore, to reduce the wealth of a business to a list of pieces of property on hand, for any going business both owes others and is itself owed by others. Moreover, much money spent in the past has gone for intangible values, such as patent rights, franchises, trademarks, which have a very distinct economic significance, although these values are not to be counted and appraised with the same precision as pieces of material property. On the other hand, the business may be called upon to meet certain obligations, not yet due, but for which it may be liable in case of the default of someone else.

All these intangible values and contingent liabilities should be expressed in the balance sheet, because they are all significant in determining the true wealth value represented by the business at the time. The balance sheet is thus a summary of the property and rights actually held by the business, and those which others hold against it. For the sake of clearness, the property rights owned by the business—its assets—are grouped together on one side, and the property rights held against it—its liabilities—on the other.

The general income and expenditure, or profits and loss account, represents a summary of the changes that have occurred between the times at which any two balance sheets are taken. The period is arbitrary. The unit of one year, ordinarily chosen, is used merely as a matter of convenience.

**Comparative Balance Sheets.**—For the purposes of illustration we will take the accounts of an industrial company of medium size. On December 31, 1918, and on December 31, 1919, the general record of its property owned and owed was:

## THE AMERICAN SNUFF COMPANY

(In even thousands)

<i>Property Owned</i>	1918	1919
Real estate, machinery, etc. (that is, the permanent property used in its business not susceptible to important changes from year to year).....	\$11,737,000	\$11,811,000
Securities owned (the investments in other companies or in government or similar bonds) .....	1,331,000	1,424,000
Inventories (the supplies of raw material, semi-finished products, and finished products in its storerooms).....	4,217,000	4,159,000
Accounts and bills receivable (the open accounts, notes, and acceptances of the customers to whom merchandise has been sold but who still owe).....	1,527,000	1,582,000
Cash .....	993,000	1,063,000
On the other hand,	<u>\$19,805,000</u>	<u>\$20,039,000</u>
<i>The Company Owed</i>	1918	1919
Bills and accounts payable (owed to its creditors for merchandise purchased but not paid for).....	\$704,000	\$636,000
This was all it actually owed to outside parties, but at the same time the business was responsible (that is, had to account to somebody) for the following items:		
Dividends declared to be paid the following month on the preferred stock.....	59,000	59,000
And on the common stock.....	330,000	320,000
Set aside as a reserve or safety fund to be drawn on in case of fire.....	298,000	265,000
Set aside as a reserve or safety fund to be drawn on in order to replace buildings or equipment when they wear out or become out of date.....	919,000	1,037,000
Original investment by the preferred stockholders .....	3,953,000	3,953,000
Investment by the common stockholder..	11,000,000	11,000,000
And finally a kind of left-over, or surplus, into which goes the profit or the loss from the year's business.....	2,542,000	2,869,000
	<u>\$19,805,000</u>	<u>\$20,039,000</u>

Accordingly the amount of property owned by the company and the amount it must account for is the same. Such a balancing of the two is called a "balance sheet."

By comparing the two balance sheets it will be seen that the "left-over" or "surplus" is greater at the end of 1919 by \$327,000. Clearly this must be explained by the income account of the year that transpired between the two balance sheets. It is. During that year the company made net profits of \$1,774,000. Of this net profit it paid out \$237,000 in dividends on the preferred stock and \$1,210,000 on the common stock. Consequently there remained \$327,000 additional property in the hands of the company at the end of the year. This explains the increase of \$327,000 as shown by the surpluses in the two balance sheets.

**Surplus and Deficit.**—From this brief statement of actual accounts it will be seen that the balance sheet is merely a survey. On one side of a sheet of paper is placed all the property, real and personal, material and intangible, that a corporation may own. On the other side are placed the amounts it owes. And if, as is very improbable, the two do not agree, then the difference is inserted as a kind of bookkeeping adjustment. If this adjustment has to be inserted on the debt side, it indicates that the debts are less than the property owned. The adjustment is therefore called "surplus," or left-over. If the adjustment has to be inserted on the property side it indicates that the debts exceed the property. It is therefore called "deficit," or "deficiency."

**Computation of Profit or Loss.**—Any changes from year to year in the surplus or in the deficit arise through the profits or the losses in the business. But these profits or losses are not easy to compute, owing to the numerous and intricate adjustments that must ordinarily be made.

On the surface the computation of profits seems simple and explicit. From the gross revenue or receipts of the business, the direct expenses—labor, materials, rent, and the like—are first subtracted, leaving a balance which is the gross profit. This is easily computed. From this, the net profit is obtained by a series of adjustments. It is these adjustments which cause the difficulties of both accounting theory and accounting practice. These difficulties arise chiefly in transferring intangible economic values into figures. In spite of the strictness and apparent rigidity of figures, profit or loss is at best an estimate, subject to all the inherent errors of our human judgment.

The average business man is uncritical. Profit to him represents the difference between the cost of his goods and the amount he receives for them after he has made adjustments for what he had on hand at first and what he had left. But this conception of profit is not true unless the phrase "cost of goods" is given a wider significance than is customary among many business men. The goods have cost not only what was paid for them but also what was lost in the business through handling them.

**1. Adjustments of Wasting Assets.**—It is necessary to make two independent sets of adjustments in order to reduce the gross profits to the net profits.

The first series of adjustments are those concerned with the wearing, wasting, deteriorating, and mere aging of the physical property used in the business. The buildings, machinery, tools, and all the fixed assets have been worn and have grown less valuable during the time in which the goods were being manufactured or offered for sale; many accidents and unforeseen losses have occurred which must be included among the expenses of doing business. So that the specific cost of the goods should be augmented by a series of invisible or insensible

costs which can only be estimated roughly. All this is summarized in the idea that the gross profits must be reduced by a series of adjustments in order to obtain the true net profit.

**2. Adjustment for Losses of Reserves.**—The second set of adjustments represents the losses of the reserves required to meet the unforeseen and unpredictable contingencies that arise in every business. They include insurance, accident losses and reserves, special liabilities imposed by statutes, and reserves for unprofitable improvements necessitated by the public demand. Although individually unpredictable the experience of every business has shown that these expenses and losses are certain to occur in one way or another. The remainder after these two sets of adjustments have been made represents the net profit from the operation of the business.

Before discussing how it is wisest to handle this net profit, both the manager and the investor must use some system or rates of computing it. He must be able to reduce his gross profit to net profit so that he has full confidence in his result. The immediately succeeding chapters discuss how this should be done.

## CHAPTER XII

### REPAIRS, DEPRECIATION, AND OBSOLESCENCE

**Definitions and the Determination of Costs.**—As stated at the end of the preceding chapter, the first set of adjustments that must be made to the gross profit from the operation of a business, in order to reach the net profit, covers those losses in the physical property which are due to wear, breakage, and the deterioration of property that comes merely from age.

Repairs represent the costs of replacing broken and worn equipment, when it is clear that the replaced part has a relatively short period of usefulness. Its cost is paid for directly out of the current earnings and it is presumed that the basic capital of the enterprise is merely maintained, not increased, by the repair. Depreciation is a charge against earnings which represents the insensible loss in useful value of all equipment which cannot be compensated by repairs—the slow crumbling of a foundation or the insensible oxidation of an iron casting. As it cannot be directly compensated for by any specific expenditure during the current operation of the business, it must be offset by subtracting a certain amount from the gross profits. This deduction is thereafter held as a reserve to be used when the equipment is finally replaced, that is, when the foundation has entirely crumbled away or the casting entirely gone. Obsolescence is a charge against earnings required by the simple fact that tools, machinery, and similar material equipment pass out of date before their apparent usefulness has ceased, that is, before their full life has run. Like depreciation, it must be compensated for by the creation of a reserve which may be drawn upon when it becomes wise to discard a still serviceable

machine in order to replace it by one of more modern and efficient construction.

The cost of repairs can be exactly stated. It is known with a certainty, provided some precise method of charging repairs is adopted and the books of record are correctly kept. Experience can give a fairly accurate basis upon which to judge of the length of life of tools and buildings, so that the depreciation charge is more exact than a mere guess; but any estimate must necessarily be less accurate than the specific payments for repairs. Obsolescence can be predicted much less precisely, because a new invention may render useless machinery recently installed. Yet by using a large number of machines of many kinds, it is probable that the so-called "law of averages" will enable the engineer of the company to estimate an average obsolescence constant with something approaching an intelligent guess. It is this difference in accuracy in determining the three charges that makes the use of our particular classification expedient.

**Repairs.**—The repair charges are definite because they can be measured over a given interval of time. They should include only those replacements which are not likely to be of value beyond the period chosen for the basis of computing the earnings. This period is usually a year. We may say, therefore, that in the practical procedure of current accounting methods, the gross profits of the business should be charged directly and specifically with all replacements and repairs which are not likely to have an effectiveness beyond a single year.

No reserve for repairs should be created and no reserve account is ordinarily kept. If such a reserve appears to be necessary in a certain instance it would be clear evidence that the replacement which the reserve was intended to care for had a significance beyond the single year and was therefore not a repair at all, but belonged to one of the other charges, due



to the deterioration and replacement of more permanent property. Most manufacturers, however, follow the practice of classifying as repairs all small charges. There is no doubt but that this common practice of considering as repairs all replacements of low cost, irrespective of their period of usefulness, has the great advantage of simplicity and ease of calculation. Yet it has no logical basis. The important pragmatic distinction between a repair and replacement is that the former is a charge on the earnings of a single year while the latter is a charge against the earnings of several years. The distinction is therefore one of time, and time only. It has nothing whatever to do with the cost of the installation—whether a pane of glass, a new turbine condenser or a new chimney. However, convenience is a sacred canon to the practicing accountant, and cost will probably remain as the basis for defining repairs.

**Depreciation.**—Depreciation is due to the slow deterioration of physical property. The heavy castings of a great turbine for instance slowly corrode, notwithstanding the frequency with which the turbine is overhauled. It is illogical and misleading to charge the cost of the entire new machine or structure to the gross profits of the year in which it is finally cast aside, for its decay has been gradual during all the years since it was installed. Rather should each year bear its proportionate burden; and in order to charge the business of each year with this proportionate burden, not to be actually expended until years afterward, it is necessary to create a fund out of current earnings which shall accumulate from year to year in exact accordance with the imperceptible decay of the machine.

Needless to say these reserves set aside each year must be made regularly and uninterruptedly, and, so far as human judgment permits, in exact proportion to the wearing and aging of the physical property. Under no condition should they be made to correspond to the relative prosperity of the business or

the caprice of the directors. Under no condition should the depreciation reserve be manipulated for speculative purposes, or made so markedly irregular as to suggest that it was manipulated according to income or in order to avoid federal income taxes.

An example of the poor policy of that kind occurred in the history of the American Can Company. In 1911 the preferred stock had over 20 per cent accumulated dividends against it. During the year the common stock was quoted between  $8\frac{7}{8}$  and  $12\frac{1}{2}$ . The fact that the earnings were far and above any previous year was entirely and successfully obscured by making a secret depreciation charge over five times that of the average of the preceding five years and over four times that of the previous year. Consequently the net earnings after depreciation appeared about the same as the preceding years, and gave no intimation of increased value for the common stock. The "inner ring" of directors was therefore enabled to acquire large amounts of both common and preferred stocks. During the year 1912 the large earnings of the American Can Company became matters of public knowledge and the depreciation reserve was dropped to less than a half of the preceding year. As a result the apparent net earnings after depreciation appeared twice as great as before—a rise from less than \$3,000,000 to over \$6,500,000. Consequently, too, the common stock rose from  $11\frac{1}{4}$  to  $47\frac{3}{8}$ , and the preferred stock from  $90\frac{5}{8}$  to  $126\frac{1}{4}$ . As a result of this manipulation and deception the men in the inner circle of the American Can Company's affairs made large profits.

At any time the unexpended depreciation reserve ought to represent the difference in physical condition—expressed in money—between the property owned by the corporation and new property identical with it. The question of depreciation is, it should be pointed out, one of physical property and not economic value.

Certain kinds of property may be maintained at their full physical condition by means of a constant and uninterrupted series of repairs and replacements without any reserves for depreciation. The roadbed of a large railroad system alone of all the property likely to be owned by a corporation meets these conditions, although even then not perfectly. If we presume that the life of ties, taking a specific example, is seven years, and if the railroad corporation replaces one-seventh of the ties each year, that part of the roadbed represented by ties is fully maintained. And if the life of a steel rail, under a given set of conditions, is ten years and the railroad replaces one-tenth of its rails each year, this item, too, is fully maintained. But repairs to the ballast and gravel bed itself are not so easily adjusted by this method, and all the other expenses of maintenance of a railroad's way are kept up with difficulty except through depreciation reserves. To the rigid insistence of the pioneers of railroad accounting that maintenance charges be liberal and that there must be a real addition to property before an expenditure shall be taken out of the charges for maintenance and considered a real improvement, is due the relatively low capitalization of our American railroads.

**Obsolescence.**—Maintenance of property does not in the least insure the continued earning capacity or economic value of the property. This is particularly true in manufacturing businesses of all kinds where competition is so keen that only by taking advantage of the most efficient machinery can the manufacturer hope to reduce his costs of production to such a level that he can do business at a profit. One of the commonest causes of failure among manufacturers is the reluctance to "scrap" machinery, still good of its kind, which has been superseded by better and faster models. A manufacturer may have set aside sufficient reserves to replace his old machinery when it is entirely worn out, but these reserves are inadequate to meet

the cost of new machinery when there is still some life left in the old. The appearance of a new competitor with thoroughly modern equipment makes certain the failure of the long-established manufacturer.

Property may become out of date from a variety of causes. The commonest is the invention of new machinery that can do the work better or cheaper. But there are other causes not thought of at first. A sudden change in style may make thousands of dollars' worth of the lasts of a shoemaker or the patterns of a dress goods manufacturer utterly worthless. A sudden change in the public's fancy may make useless great amounts of machinery devoted to a special purpose. A notable instance of this is the case of the old American Bicycle Company, the machinery of which became practically worthless as the public's plaything changed from the bicycle to the automobile. Even a change in relative labor costs may render large quantities of machinery obsolete. When the New England Cotton Yarn Company was organized, its spinning machinery consisted almost entirely of English mules, requiring skilled labor for their operation. Many of the mule spinners were Englishmen. The supply of this highly skilled labor decreased, whereas the demand for it increased. As a consequence, within a couple of years the wages for mule spinners had risen so high, comparatively, that it was cheaper to spin coarse and medium yarns on ring frames the operatives of which were paid the wages of unskilled labor. To meet this change of labor conditions the company was compelled, ultimately, to throw away thousands of dollars' worth of mules having many years of usefulness remaining to them, and replace them by ring frames. Changes in social condition may make it expedient to provide improved or altogether different surroundings for factories; social conditions may also require the substitution of improved public utilities; as a result, the older, more obsolete facilities cease to have any value whatsoever.

The ferry boats plying between Manhattan and Brooklyn were once a public necessity and of great value. The bridges superseded the ferries and the boats had little more than scrap value.

It is easy to perceive the theoretical necessity for an obsolescence reserve, but it is exceedingly difficult to determine, in practice, the appropriate annual amounts that must be set aside out of gross earnings. No one knows when a machine will become obsolete, nor the cost of the improved model which supersedes it. It is, it would seem, a guess based on a guess. And this is strictly true in a concrete case; but it is not true in the large average of cases. One must admit that it is obviously impossible to set aside a regular annual allowance, so that when at an unknown time in the future a machine of uncertain cost must be paid for, the fund will be just sufficient to meet it. But it is possible to set aside an annual allowance which will gradually create a fund from which may be drawn the extraordinary costs of replacing usable machinery by new and improved forms. The amount of this annual allowance must depend on the nature of the business. Some parts of the plant will surely become obsolete before they are worn out; some parts will not. In a central station electric light system, it is almost certain that the generating units will be superseded by more efficient models before they are worn out; it is equally certain that the copper wire will be quite as valuable for the purpose of the electric light company many years hence as it was when first installed. It may never become obsolete. Between these two extremes there is much of the equipment that will probably, but not certainly, be superseded before it is worn out, much that probably will be worn out before it becomes obsolete. The engineer is fully conscious of these probabilities. He may conclude, for illustration, that a third of the original cost of a normal central station electric system—representing such parts as wire and

insulators—will not be superseded by improved forms. This part of the plant requires no obsolescence reserve. He may conclude that another third may be superseded, but that the extent cannot be predicted. Some slight obsolescence reserve is required for this third, in addition to the regular depreciation reserve. The property representing the remaining third will almost surely be superseded before it is worn out, but the time will be uncertain. A very substantial reserve will be required for this portion of the corporation's property.

**The Important Principle of All Reserves.**—There are no undisputable canons of accountancy that require exactly that the three charges of repairs, depreciation, and obsolescence be made against gross earnings in order to reach the net earnings of the business. The fundamental principle is that earnings cannot be considered as net earnings, as real earnings, until there is assurance that the economic value of the property of the business, as evidenced by power to earn, has not declined during the period in which the earnings are being made. The capital fund employed in the business must remain intact. Clearness, in the sense of being susceptible to but one interpretation, and truth, in the sense of expressing a money value for an economic value that is exact within a predictable limit of error—those qualifications are the ideals for the methods of accountancy.

**Objectionable Accounting Practices.**—Certain objectionable practices have crept into the treatment of depreciation charges that call for condemnation whatever theory of accountancy one accepts. Foremost, because the least logical, is the practice of assuming that the payments to the sinking fund of a corporation's bonds will offset the depreciation and obsolescence reserves. The sinking fund is maintained to safeguard the market value of the bonds or facilitate re-

funding them. There is no conceivable connection between the amount demanded by the investment banker as an adequate sinking fund allowance and the rate at which the property of the corporation grows old and useless. In practice the sinking fund is a certain percentage of the bonds. Made universal, it would imply that the larger a corporation's debt the more rapidly its property would decay and become out of date. This is nonsense. Furthermore, as the sinking fund increases, the debt gradually decreases in amount and with it the sum that must be paid into the fund each year. This implies that the wasting and aging of a corporation's property grow less as the corporation grows older—again nonsense.

Another objectionable practice in connection with depreciation is that of allowing new construction to offset the various charges which we have called here "depreciation" and "obsolescence." The sinking fund payments are regular and certain, and as such correspond to the regularity and certainty of the decay of physical property. But new construction has not even this advantage of being regular and certain. During periods of pronounced business activity there will be large amounts of construction, during periods of depression, little or none. From the corporation's point of view, it is very convenient to allow the charges to depreciation only during years of pronounced activity and large profit, but such a method gives a false picture of the business and is therefore wrong.

A third bad practice, tolerated quite extensively by public service accountants, is based on the theory that depreciation can be cared for by setting aside a certain proportion of the gross earnings of the business. Clearly the aging and wasting of a large proportion of the equipment of the business bears little relation to the amount of business done, and less to the amount of gross profits. Carried to the extreme it would mean that when the corporation earned no gross profits its property would neither age nor wear out.

## CHAPTER XIII

### PAYMENTS ON ACCOUNT OF BORROWED CAPITAL

**Interest Charges Against Net Profits.**—According to the notation used in the foregoing chapter, gross profits represent the mere difference between the total receipts for the goods sold and the total expenditures involved in their production and sale. Net profits represent the gross profits of the business after there have been made deductions for repairs and such deterioration of equipment and intangible property as is due to use and age. So described, net profit is the surplus left after the direct outlays have been paid and the capital brought up to the same point of value as it was at the beginning. It does not take into consideration the amount of capital involved; nor does it distinguish between the capital owned by the proprietors of the business and that borrowed from outside sources.

To reduce net profits to an amount which the directors may use in estimating surplus earnings available for special and general reserves and for distribution among the stockholders as dividends, a further adjustment is required, which involves the apportionment of the net profits between the actual proprietors of the business and those who have lent capital. The business must earn enough net profits to pay its interest charges before there shall be any remainder either to put back into the business or to distribute to the stockholders.

**Classification of Payments for Borrowed Capital.**—Payments for borrowed capital usually enter into the busi-



ness in five different ways. There are discounts given and taken on merchandise sold and bought, for the payment of cash before the bill is actually due. There are interest charges paid to the banks in the form either of interest or of bank discount. There are interest charges paid to the public in the form of bond and note interest. There are direct charges against profits arising from the use of other people's property, tangible and intangible, which take the form of rentals and royalties. Lastly there are interest charges indirectly paid by selling bonds at less than their par value, a procedure which requires throughout the life of the bond an annual charge to bond discount.

**Cash Discounts.**—If the cash discounts given and taken exactly balance, it will indicate that no adjustments to net profits are necessary, because the corporation is lending its capital to its customers or borrowing capital from its creditors. In case cash discounts are taken by the corporation in an amount in excess of what are taken by its customers, there must be an adjustment to show that the corporation earned something by financing the merchandise stocks of its customers. This amount should be shown clearly as an addition to net profits and not as a part of net profits, because the amount represents a kind of banking profit, inherently different in character from the profit obtained through the ordinary conduct of the business. Similarly, if the discounts taken are less than those given, the difference should be shown as a deduction from net profits to indicate that some of the apparent net profit was made by using the capital of the corporation's creditors.

**Bank Discount.**—Bank discount as interest paid for the carrying of merchandise loans is more clearly defined. Like cash discount, it should represent an adjustment to the net

profits. Ordinarily it is a deduction, as the company has, presumably, borrowed from its banks. But it sometimes happens that the corporation has been amply provided by its stockholders with capital, so that it may receive interest from its bank deposits. Clearly this would be an addition to net profits, and should be shown as a banking profit and not as a profit from the ordinary conduct of the business.

**Interest on Funded Debt.**—It is equally clear that interest paid on the public debt of the company should be a direct charge against net profits and not a mere incidental deduction from the gross profits, as it has sometimes been regarded. If the corporation, like the American Sugar Refining Company, or the express companies, before the Great War, had loans to other companies the interest on these loans is an addition to the net profits of the business. This is true even when the interest is received from another corporation engaged in a similar line of business, as dividends received by one railroad on the railroad stocks held in its treasury. The distinguishing test, which should indicate whether or not the dividends or profits of a subsidiary or allied company are to be regarded as parts of the net profits of the parent's business or additions to the net profit, is the amount of control exercised over the subsidiary and the closeness with which the two businesses are connected. It would be wrong for the United States Steel Corporation to pretend that its ore-carrying and smelting companies are other than mere subsidiaries of its main organization, or that their profits are additions to its own profits. On the contrary, it would be equally wrong for the American Express Company, the second largest stockholder in the New York, New Haven and Hartford Railroad, to pretend that the railroad's profits, if such there are, should be regarded as a part of the net profits of the express business.

This distinction is strictly true whether the subsidiary is

merely another corporation of the same kind doing the same business, or a corporation of a different kind whose business is secondary to and contributory to that of the main corporation. In the former case the separation may be for merely legal reasons. Thus the laws of Texas require a railroad operating in that state to be incorporated there. It is therefore strictly correct to consolidate the accounts of the main road and the subsidiary, since the two constitute, for all purposes of financial analysis, one and the same corporation. In the latter case, when the subsidiary is only a subordinate of the main company, it keeps a separate set of books, merely because the businesses are different. During the summer and autumn of 1917 many public utility companies, especially in the Middle West (notably the Detroit Edison Company) purchased coal mines in order to insure themselves against a threatened coal famine. Thereafter the apparent earnings of the public utility could be manipulated at will by shifting the prices and conditions of purchase under which the mining subsidiary billed its coal to the parent public utility. Obviously the only fair way would be to consolidate the profit and loss accounts of the two. Perhaps the mine, in addition to supplying the parent with coal, also sold coal on the open market. In this case an entirely separate and distinct profit and loss account must be kept for the mine (provided the price charged to the parent was the same as that charged to the outside customer), because then the mine was standing on its own feet, as an independent concern, and its success or failure should be evidenced by its own accounts.

The most exhaustive and elaborate system of accounts that attempts to separate the sources of income in accordance with this principle of the closeness of control and interdependence of corporations is that of the Union Pacific, about 1909. The Union Pacific Railroad derived its profit from six types of companies (besides its own railroad running from

Omaha to Ogden) whose financial and operating conditions were in various degrees of closeness to the parent company:

1. Accounts consolidated, so that there is a single profit and loss account; assets and liabilities consolidated so that there is a single consolidated balance sheet.
  - (a) Fundamental parent: Union Pacific Railroad. Council Bluffs, Iowa (Omaha), to Ogden, 1,101 miles, together with the branches operated as a single operating unit, 3,390 miles. This is the fundamental operating and financial nucleus.
  - (b) Auxiliary companies:
    - (1) Oregon Short Line Railroad. Ogden to Huntington, Oregon, with branches, 1,178 miles.
    - (2) Oregon Railroad and Navigation Company. Huntington, Oregon, to Portland, with branches, 1,143 miles. Two large railroad systems the stock of which is entirely (except a few shares) owned by the Union Pacific Railroad. Operated, from the point of view of the company, separately, but the operations consolidated with those of the parent before presenting to public.
  - (c) Proprietary companies: Utah and Northern Railway, Columbia River and Oregon Central, etc. In all, 17 small corporate entities, parts of the Union Pacific Railroad or its two auxiliaries, the corporate independence of which is retained for legal or other reasons.
2. Accounts independent. Income comes into the treasury of the Union Pacific Railroad as interest on invested capital:
  - (a) Investments entirely controlled and owned: Oregon and Washington Railroad, Central Idaho Railway, Union Pacific Coal, and a variety of small corporations.
  - (b) Investments entirely controlled, but only partially owned: St. Joseph and Grand Island Railroad, Southern Pacific Company, and other smaller corporations.
  - (c) Investments partly controlled and partly owned: Chicago and Alton Railway, Kansas City Terminal, Illinois Central.
  - (d) Investments over which the parent has little control and owns only a small part of the outstanding securities—

investments, strictly speaking, although in many cases the parent profits by close traffic agreements: Atchison, Topeka and Santa Fé; Baltimore and Ohio; Chicago and Northwestern; Chicago, Milwaukee and St. Paul; New York Central and Hudson River Railroad.

**Rentals and Royalties.**—It is clear that in the vast majority of cases rentals for the use of tangible property are in all respects identical with interest payments, except in the control or administration of the hired property. Similarly, with certain forms of a railroad's rolling stock, the question whether the equipment is bought outright or merely hired resolves itself into a question of the cost of hiring money or paying daily car rentals—a problem primarily of the money market.

When the property leased is of large value and its earning power subject to abrupt and unpredictable fluctuation, the rentals are sometimes arranged on the basis of the independent earning power of the leased property. Especially is this practice common if, as in the case of railroads, a separate and independent record may be kept of the amount of business which the leased line brings the main road, or of the earnings arising from the operation of the leased line alone.

Rentals paid for the use of property rights are in some respects different from those paid for the use of tangible property. These rental costs will vary greatly according to the nature of the business. In manufacturing businesses sometimes royalties cover water rights, power sites, or easements, but more frequently they represent royalties for the use of patents. Frequently a company is organized whose only asset is the ownership of a patent and its only receipts the royalties paid by one or more companies manufacturing under the license of this patent. In the case of public utility companies these payments are for the use of other companies' rights of way and easements, for rights under "break down"

contracts, and, in some cases, rights under previously granted franchises.

A rental representing both payment for the use of property and property rights together is that exacted for licensed machinery. The actual cost of manufacturing a Goodyear welting machine is probably not over \$1,000. The United Shoe Machinery Company charges 6 cents a pair "royalty" or rental for the use of that machine, so that in the extreme case of an operator turning out 300 pairs a day the rentals on the single machine would amount to \$18 a day, or over \$5,000 a year. Obviously only a small proportion of this is represented by interest on physical capital. Here the rental is determined not by the cost of producing the machinery itself, but by the economy to the users. And conversely, if the corporation receives an amount for the use of its patents or other exclusive privileges, such receipts should enter the accounts as additional receipts, supplemental to the regular income and expenditure of the business.

From what has been said it seems clear that the various costs incident to the use of the capital of others in a business should be considered together as deductions from net profits and should not be treated as expenses of the business. From every point of view, except the method of payment, cash discounts, bank interest, interest on funded debt, and rentals, are the same. All should, therefore, be regarded as the cost of using others' capital, not the cost of operating the business. Similarly, from the other side, receipts from cash discounts, interest allowed by the bank, and dividends and interest received from securities, should be regarded as an addition to, and not as a part of, the net profits of the business.

**The Amortization of Bond Discount.**—The cost of capital is frequently paid in directly through the sale of securities at a discount. A corporation whose credit is on a 5 per

cent basis may, for illustration, sell 20-year 5 per cent bonds at par. The same bonds may be sold at about 114 if they are made to bear 6 per cent, or at 88 if 4 per cent. If this is borne in mind it is clear that when a corporation elects to sell its bonds for less than par it has secured the right throughout the life of the bond to pay a lower coupon rate of interest than the corporation's credit would warrant at the time the bonds were issued. For this reason the discount or deduction from par at which the bonds are sold should run through all the years that the bonds are outstanding. It should, in effect, be regarded as a kind of supplementary burden which the corporation shall be compelled to carry throughout the life of the bond to balance a lower coupon rate of interest than was warranted by the credit of the corporation when the bonds were originally sold. So regarded, it is a deduction from the net earnings, indistinguishable in theory from the regular coupon interest on the bonds. In practice, however, it is not paid to the holders of the bonds, but is paid into a reserve fund which will extinguish the bond discount at the time the bonds are due. Conversely, in those rare cases when bonds are sold at a premium, this premium should be employed to reduce, each year, the interest paid on the bonds by a proportionate annual instalment. When the bonds fall due the discount or the premium, according as the bonds were sold for less or more than par, will have been entirely extinguished through the annual adjustments to the regular coupon disbursements.

**Expenses Involved in Sinking Funds.**—Again any expenses involved in a sinking fund must be charged off before the account is entirely free of all charges for the use of borrowed capital. This introduces many complexities in the treatment of sinking funds, and the actual amount of net earnings is sometimes obscured by the manner in which they are treated.

The increase in the market price of corporation bonds by reason of the presence of a sinking fund is one of the most interesting aspects of corporation finance, because its causes are essentially psychological. They are remnants of a point of view which regarded corporation finance as grounded on the same principles as private finance—remnants of the original sharp divergence between the position of owner and that of creditor. The stockholder recognizes the permanence of his investment, but the bondholder clings to the fiction that his security must be redeemed in money by the corporation at a certain definite time. He assumes that the bonded lien on the corporation's assets is but temporary and that the stockholders look forward to the time when the corporation shall be free from debt. The corporation managers in placing the bond issues must defer to this prejudice on the part of investors because by so doing they can borrow more cheaply.

**Occurrence of Sinking Funds.**—Until 1893 the sinking fund provision was common among railroad bond issues. It gave considerable trouble, however, as a trustee of a bond issue would not force the payment of the instalments if such a course was likely to result in a receivership. In that event the bonds which he was seeking to protect would be injured to a vastly greater degree, as experience had shown that the publicity of a railroad's financial disaster hurts the value of every one of its bond issues, even the most secure. The trustee, therefore, merely brought pressure to bear on the railroad corporation to meet the sinking fund obligation, but if the management remained obdurate nothing was accomplished. So that in practice, at the critical moment when the sinking fund was intended to be of most use in protecting the bonds, it proved to be completely ineffective. As the bonded debt was reduced, through successive reorganizations, to an amount well within the replacement cost, the in-



vestors recognized that the courts would protect the railroad, under all ordinary circumstances, in the payment of the underlying bonds. Beginning about 1894 these bonds were therefore made of late maturity, and were not provided with sinking fund provisions. They were, in effect, irredeemable debts. During each successive year, through the reinvestment of earnings and the proceeds of the sales of overlying securities in the physical property of the roads, the security of these long-term bonds has been strengthened much more than any sinking fund could have done.

Since 1893 most of the old underlying sinking fund railroad bonds have either been paid off or else refunded into the large permanent general mortgage issues. But the practice of issuing bonds with a sinking fund requirement is much commoner outside railroad issues. Investors have not been ready to concede to other forms of private enterprise the public character of railroads, so they have required the presence of the sinking fund provision to make more certain the refunding or the redemption of the bonds at maturity. This is especially true in case of industrials, presumably because of the instability of the earning capacity of the property behind the bonds. Similarly, practically every one of the few bonds issued by mining corporations is protected by a sinking fund requiring that the bonds be paid off as rapidly as the coal or ore is dug from the earth.

**Treatment and Investment of Sinking Funds.**—The fundamental purpose of the sinking fund is to reduce the ratio between the amount of the debt and the value of property by which it is secured. The margin above the bonds, the equity, is increased. Different provisions apply to the operation of different sinking funds, but this end is the primary one in all cases. The variations concern either the rates of payment into the sinking fund reserve or the manner in which the

reserve shall be invested. These variations, some of which are of considerable significance, are almost innumerable.

The usual requirement for the investment of sinking fund reserves is that the bonds of the same issue be bought on the open market and canceled. Sometimes the bonds are not canceled but are held by the trustees and interest collected upon them, the proceeds of which are used for additional bond purchases. It is usually provided that the bonds to be acquired for the sinking fund may be purchased in the open market at the price specified in the bond as the call price, and further that if they are not procurable at the fixed price or lower, they may be called by lot. It is important that the corporation or trustee be empowered to call the bonds or otherwise the holders may exact a high price, especially if the bonds are closely held. And further it is important that the bonds be callable by lot, for otherwise certain holders may be discriminated against if the call price becomes less than the market price.

If a fund, instead, is created to be used finally in the purchase of the bonds when they fall due, the same care should be used in keeping it intact as in the investment of an insurance fund. When it is not invested in other bonds and securities the corporation may sometimes use it to construct new property, or for improvements covered by the original mortgage. By increasing the value of the property beyond its normal depreciation the security of the outstanding bonds is correspondingly increased. Moreover, it is often possible for the management to make improvements in the mortgaged property so that the earning capacity of the corporation can be kept abreast of the advances in technical construction. In this way the equity of tangible property itself is increased and the equity of earning capacity as well. This use of the sinking fund reserves has only recently come into prominence, and is now almost without exception restricted to the sinking

funds of large public service open-end mortgage bond issues. The only objection to it is the possibility of flagrant abuse. Consequently the method of investing the sinking fund in the very bonds they are supposed to protect is to be preferred over the investment in property improvements.

**Serial Bonds.**—Closely allied with the method of preparing to redeem bonds during their life by means of a sinking fund, is the method of actually redeeming them through the serial maturity of a part or the whole of the issue. This plan, by which a certain series of the bonds of an issue automatically mature each year, has been adopted universally for equipment obligations and to a very large extent for timber bonds, although it is much less frequently found among corporations than among municipal bond issues. It occurs, however, with perhaps increasing frequency as its advantages are fully realized. These advantages, from the point of view of the corporation, consist of the gradual cancellation of a part or the whole of the issue during its life, without the payment of a redemption premium, and a wide market for its bonds among both banks which buy short-term bonds and investors who buy medium- and long-term bonds. The advantage to the investor of the instalment bonds is the assurance that a part of the issue will be paid off before maturity without the complication and frequently equivocal administration of the sinking fund. Also, owing to the wide variety of maturing dates, the investor has the privilege of selecting the time at which his bonds fall due. Another device, very uncommon but effectual, is for the corporation to pay a certain sum each year toward the principal of each bond. In this way, each bondholder is paid a part of his claim before it is due, while the security behind the bonds remains the same.

## CHAPTER XIV

### THE CORPORATE SURPLUS

**Sources of the Surplus—1. Earnings.**—At this point it may be convenient to summarize the conclusions of the preceding chapters. Gross profits represent the difference between the total receipts of a corporation and the total expenditures incurred by the actual conduct of its business. Net profits represent what remains of gross profits after the appropriate reductions are made for maintaining the full economic value of the plant and equipment used in the enterprise. From the net profit it is necessary to subtract the cost of all capital not owned by the corporation itself, or to add the receipts for the use of such of the corporation's capital as is employed in other enterprises. The remainder may be regarded as the surplus belonging to the corporation itself—its gain from the year's business. Out of this corporate surplus certain reserves may be set aside. What then remains—the stockholders' surplus—may be distributed among the stockholders in such a manner and under such conditions as may seem expedient to the directors. The immediately succeeding chapters deal with questions of financial policy determining the wise distribution of the corporate and stockholders' surplus. This policy involves more than the simple question of the amount of dividend that shall be paid to stockholders. It involves the broader question of the best use to be made of the corporation's net profits, particularly so far as the distribution of the surplus affects the general credit of the corporation.

**2. Paid-In Surplus.**—The surplus itself may come from other sources than the profits of the year immediately pre-

ceding. It may be paid in by the stockholders directly at the beginning of the business. It may arise through the sale to either stockholders or the public of stock or bonds at a premium above the par value. It may arise through the sale of capital accounts for an amount in excess of their book value, or the value at which they are carried in the plant or property accounts. It may arise through the reappraisal or physical valuation of the assets of the company. And, lastly, it may arise through the accumulation of successive annual profits. This last is the ordinary method under which surplus arises.

The surplus is seldom paid in directly by stockholders, except in the case of the organization or reorganization of banking, insurance, or investment companies. At least a moderate surplus must be shown on the balance sheet of such a company to give an appearance of strength, so that its financial statement may inspire confidence. The laws of many states also require banking companies to accumulate a surplus above liabilities which shall not be used for the payment of dividends. By subscribing this surplus at the beginning, the stockholders may draw dividends on the capital stock after the first year of business. Furthermore, at a critical time in the history of a bank or insurance company the stockholders are frequently required to subscribe to the surplus in order to maintain the unquestioned credit of the company. A good illustration of this is afforded by the experience of a large insurance company directly after the San Francisco fire. The Hartford Fire Insurance Company had at the time a capital stock of \$1,250,000 and an admitted surplus, above all liabilities, including legal reserves for outstanding policies, of over \$5,000,000. The stock with the par value of \$100 was quoted at \$1,200 a share. The company paid out over \$7,000,000 to the San Francisco policyholders. The disbursement of this large sum, the largest ever paid by any American insurance

company for a single conflagration, would have used up the surplus and seriously injured the general credit of the company. Only by maintaining this general credit untarnished could the company hope to maintain its business and recoup itself for the loss. Accordingly it sold 7,500 shares of new stock to its old stockholders for \$500 a share, par value \$100. This transaction increased its admitted capital stock by \$750,000—from \$1,250,000 to \$2,000,000—and added \$3,000,000 to the surplus. In all such cases the surplus is regarded to all intents and purposes as a part of the capital stock. In no sense is it a reserve for dividends; and if, under extreme provocation, the directors consent to distribute a part of the paid-in surplus to stockholders, the report of their action does irreparable injury to the credit of the company.

**3. Sale of Stock at a Premium.**—When stockholders or the public buy stock of the corporation at a premium, the money paid in is in excess of the liability created by the issue of the new security. Strictly speaking, therefore, it is surplus. Some of the successful Massachusetts lighting companies have large surpluses created in this way; in one or two cases the amount of premium is nearly equal to the outstanding capital stock. The exact status of this premium is very difficult to define. Clearly it is capital paid into the treasury of the company to be invested in the property assets of the company, yet it does not represent an acknowledged liability to stockholders or creditors. From all points of view the issue of stock at a premium, involving the continuation of the premium as a mere liability, is undesirable. It leads to controversy and, in the end, might be merged with the regular surplus account and used for dividend disbursements under the guise of unappropriated surplus. A large premium surplus of the New Haven Railroad was used in this way.

**4. Sale of Property Above Book Value.**—A fourth way in which surplus may arise is through the sale of property at a price above its cost or above the figure at which it is carried in the plant account. In a few noteworthy cases book values of real estate have been marked up to agree with ostensible increases in value. Sometimes, fortunately not often, this book-keeping increase in assets has been offset by a corresponding increase in the represented surplus available for dividends, and dividends have been straightway declared out of it. Thus the old United States Realty and Construction Company, in the first nine months of its operation, showed an apparent profit—including even estimated profits on unfinished building contracts—of \$930,000. It declared, however, \$1,215,000 in dividends. To bridge the gap a surplus, created by marking up real estate by \$487,625, was added to the net earnings. Soon thereafter the corporation had to be reorganized because of imminent failure. But when property is actually sold at an enhanced price, the difference between this amount and the amount at which it is carried will appear immediately as a realized asset. It must be balanced off by a corresponding liability. This will be of the nature of a surplus.

There is an old canon of accounting, much revered by English accountants, that a profit and loss balance, to be available for dividends, must arise through the regular and orderly movement of the business. A surplus arising from profit realized on the sale of capital assets would not therefore be available for distribution to the stockholders. There are substantial reasons to support this policy, but their strength depends on how close is the connection between the sale of capital assets and the regular course of the business.

Quite generally, this surplus arises merely from the sale of miscellaneous capital assets at larger prices than those at which they are carried upon the books; they may represent the receipts from the sale of machinery which happened to

be worth more than the amount at which they are carried less their depreciation. On the other hand, the fact that capital assets may be sold at a profit carries as its correlative fact the presumption that other capital assets may be sold at a loss. The surreptitious profit, therefore, of one set of transactions should be retained merely as a reserve fund to balance losses obtained from the sale of other capital assets. Such a capital surplus account serves as the means of absorbing all these untoward and embarrassing but nevertheless real deficits. In brief, then, all bookkeeping or actual profits arising from the sale of capital assets should be held as a reserve to be used in extinguishing all extraordinary deficits attributable directly to losses in the capital accounts.

The misfortunes resulting from not having a surplus reserve account to absorb extraordinary and unforeseen capital losses is illustrated by the experience of the New York, New Haven and Hartford Railroad in the year ending June 30, 1914, the year before the Great War, and so presenting no abnormal conditions. The New Haven Railroad started July 1, 1913, with a surplus of \$8,000,000 (using even figures) accumulated from the previous annual profits of the railroad business. After allowing inadequate maintenance charges and totally insufficient depreciation charges on its equipment (2 per cent, for example, on steam and electric locomotives—fifty years of life), the year showed a profit of \$270,000 out of direct corporate revenue of \$74,000,000. By transferring certain funds and adjustments to the credit of profit and loss the company was able to show a bookkeeping surplus of \$10,000,000. Out of this it paid \$2,350,000 in dividends, approximately ten times the admitted legitimate earnings of the year, and charged off \$6,000,000 of miscellaneous losses, mostly from operation covering capital losses. The capital losses of this one year extinguished the surplus accumulations of over forty years of business.



**5. Reorganization of Financial Structure.**—Another way in which a surplus may enter the books of account is through the readjustment or reorganization of a corporation's financial structure, or through the direct and explicit purchase of one corporation's assets by another. In other words, a surplus sometimes arises through the accounting adjustments incident to the organization of a new corporation. Sometimes a new company takes over the going businesses of several smaller companies. For these smaller companies a smaller par value of stocks, bonds, and notes is paid than the actual amount of the assets acquired. The new corporation does not want to mark down these assets, especially if it conducts a public utility business, so that it must set up a fictitious bookkeeping liability which assumes the nature of a surplus. A similar situation arises when a corporation organizes a subsidiary to acquire property which hitherto had not entered the books of account as assets or even as property values. This is true when a coal mine disposes of its waste "dust" theretofore considered of no value, or when a chemical industry organizes a subsidiary to use up, at a profit, some by-product theretofore regarded as valueless.

**Investment of the Surplus.**—The surplus of a corporation is kept entirely in the form of actual money only in extreme cases. The proportion that should remain in bank deposits and readily realizable cash items will depend on the nature of the business and the frequency or nearness of sudden cash demands. The surplus of certain corporations, notably insurance companies, is of the nature of a trust fund which must be kept inviolable to meet unforeseen demands. Preparation to meet unexpected losses is the very nature of the insurance business. Under most circumstances the ordinary receipts take care of the ordinary disbursements, but at the time of a conflagration the surplus must be encroached upon, since the

customary reserves are insufficient. That is the reason why an insurance company should, irrespective of its theories of investment, keep a large part of its surplus invested in short-time loans or listed securities easily liquidated. Other corporations, notably railroads, need not have a single cent of their surplus in cash or easily realizable securities. There are no sudden contingencies which belong to the nature of the business, no sudden liabilities which can be liquidated only by money. And although in the long run the insurance business is no more hazardous than the railroad, the former is forced by its peculiar nature to regulate the investment of its surplus as if the unexpected were the expected.

The great majority of businesses, such as all industrials, public utility enterprises, even most banks, should invest the surplus where the return is largest. This is in the business itself. The stockholders presume, and this presumption should be true if the business is successful, that the officials can invest the surplus in their own business better than in another of which they know next to nothing. They cannot take the surplus and invest it in open-market securities, for the reason that being engaged in a business requiring in itself careful attention to details, a close, careful attention to the stock market is the last thing that should be demanded of them. And if, led by a foolish and childish conservatism, they invest their surplus in high-grade securities, such as municipal and government bonds, they are taking a lower rate of return than the money invested in their own business ought to bring; if this be not so, the business should be liquidated and the services of the officers dispensed with.

## CHAPTER XV

### INSURANCE AND SPECIAL RESERVES

**The Necessity for Special Reserves.**—Of the various sources of surplus, one and only one may give rise to that surplus from which dividends may be disbursed. This is the surplus arising from the normal annual accumulations from the profit and loss accounts. It is the surplus coming directly from the profits of the business. The question of financial policy in connection with this surplus is the one of dividend expediency—the proportion of surplus that must be retained in the business as special or undefined reserves and the proportion that may wisely be distributed to the stockholders.

Theoretically speaking, the surplus remaining after the payment of interest and other capital charges belongs to the stockholders and might be entirely distributed in dividends, were the directors so inclined. Except in extreme cases this is not to be considered, and even in the extreme cases when it is possible, there is little to recommend such a policy. For years the Boston and Maine Railroad, under the Tuttle management, paid out every cent of surplus earnings after charges, to its stockholders. The ultimate failure of the Boston and Maine was the inevitable consequence of the policy. Were accountancy perfect and its figures rigid and accurate, especially those concerning depreciation and reserves for future contingencies, then the entire surplus might indeed be divided among stockholders with complete equanimity. But it is not. It is far less accurate than the accountant deludes himself into believing. The practical business man knows this. He takes the figures of the accountant as sophisticated guesses and directs his conduct on the assumption that the accountant has forgotten not one thing, but many

things. He fortifies himself against these omissions of the accountant by refusing to distribute all earnings in dividends, reinvesting a part of the surplus in betterments and improvements.

**Classification of Special Reserves.**—But it frequently happens that some vague guess may be made concerning at least a part of what must be set aside from current earnings to care for future contingencies. These guesses are far less accurate than even the engineers' estimates of the life of equipment or the accountants' computations of reserves for contingent liability on discounted bills. When rigidly analyzed, the reserves set aside to protect the corporation against unforeseen events fall into four more or less vaguely defined classes. There are those reserves which must be set aside for unpredictable taxes, assessments, and special levies of governmental bodies. Such reserves are generally grouped together under the heading "Reserves for Taxes." Second, there are those reserves which must be set aside to care for unusual destructions to physical property. Such reserves may, in a large measure, be omitted if ample insurance of every variety is carried. On the other hand, if the corporation carries its own insurance, as is done in many cases, the reserves set aside in lieu of the payment of insurance premiums come under this head. Third, reserves should be set aside to care for unremunerative expenses involved in meeting unforeseen demands of the public. Such reserves are of most significance among public service corporations likely to be confronted with demands for the elimination of grade crossings, smoke nuisance, for burying wires, or for repaving the right of way. None of these increase appreciably either the gross or the net earnings of the corporation. Lastly, a corporation may wisely set aside reserves to care for sudden and unavoidable fluctuations in the economic demand for its product, or the availability of its raw material—panics, booms

accompanied by scarcity of labor, protracted business depressions.

**1. Reserves for Taxes.**—Reserves for taxes do not ordinarily lead to confusion. Taxes are in part known before the period during which they accrue, and in part not. In cases like franchise taxes, excise taxes, pole taxes, they are known in advance and may be accurately apportioned. Such taxes are a direct operating expense and a discussion of them is out of place at this point. But there are other kinds of taxes which are only to be apportioned approximately; and in unusual cases the corporation must make reserves against the payment of taxes the amount and the principles of levying of which cannot be even vaguely guessed at. The excess profits tax for the year 1918, not determined by Congress until February, 1919, was of this description. It is these various unpredictable and often undetermined levies which the corporation must protect itself against, by special reserves for taxes.

The fiscal year of the company and of the tax assessor may not coincide and it will be necessary to set aside a reserve to care for any difference in assessment or when a corporation protests a new assessment in the courts.

**2. Reserves for Property Destruction.**—The second large class of special reserves that must be set aside for the general surplus are those having to do with protection against unusual and unforeseen losses to property. Ordinarily such losses are carried by insurance, and the insurance premiums, like taxes, are charged directly against the gross receipts as one of the direct expenses of the business. Under certain circumstances, however, special and somewhat unusual precautions must be taken either in addition to the regular provisions for insurance or else in lieu of the regular forms of insurance. Ordinary fire insurance policies can be secured when the corporation's pro-

perty consists of buildings and structures; such insurance, especially when distributed among several underwriting companies, may be relied upon as adequate provision against the hazard of fire. It is possible also for the corporation to protect itself against incidental losses occasioned by fire, such as loss of revenue during reconstruction or penalties under breach of contract to deliver finished goods. In the majority of cases, however, a corporation will not take out such insurance to protect it against these contingent hazards because of the great expense and the difficulty of determining the conditions and adjusting the claim in cases of loss under the policy. Yet in very many businesses, reserves must be set aside for losses of just such kinds. Contracts often call for delivery of merchandise within time limits, a break of which involves severe penalties. In case of fire it may be necessary to operate night shifts at great additional expense or else go into the market and pay premiums for the quick delivery of goods, in order to avoid the heavier losses resulting from a broken contract. In brief, many incidental losses are possible which are not, and in many cases cannot, be guarded against by the ordinary forms of insurance.

**Self-Insurance by Corporations.**—The purpose of insurance is to distribute unusual losses by shifting the burden from one individual to a large number of individuals. The insurance company justifies itself economically by supplying the clearing house and effecting the distribution of the losses. But when the corporation owns a large enough aggregate of individual pieces of property so that it can itself effect a distribution of the risks and the “clearing” of the losses, it can well save the cost of the machinery of operation of the insurance company, amounting usually to at least half the ordinary premiums. This can be done if the corporation charges itself the ordinary premiums, setting aside the amounts in a separate fund into

which are brought all the premiums and from which are drawn all the losses. And if the nature of the corporation's physical property is such as to meet the certain conditions—property consisting of small, separate, and relatively inexpensive units—it is probable that the corporation will, in the long run, profit from its insurance account. For since a considerable portion of the premium is represented by the ordinary expenses of operating the insurance company, which the corporation which follows the plan of self-insurance does not have to pay, such a corporation will create for itself within its own insurance reserve a kind of insensible reserve which will, as soon as a considerable fund has been established, fortify the normal reserve against unusual losses.

Railroads are particularly well suited to carry their own insurance. Except for their urban terminals no single hazard amounts to much and the total annual fire losses on a single system are small compared to the total property or the total income. Certain data concerning the experience of the New York, New Haven and Hartford Railroad in their insurance accounts bear this out. During the seven years preceding June 30, 1915, the average annual income of the New Haven Railroad (not including its allied enterprises) was \$63,200,000. Its fire loss averaged \$140,000 a year, or about 2/10 per cent. The year ending June 30, 1915, is probably fairly typical. The gross income was \$65,379,264. There were 247 separate fires, involving a loss of \$60,000, or only \$243 for each fire. The New Haven's burnable property was estimated at \$85,000,000. The fire loss for this year was therefore only 1/10 per cent of the gross income and less than 1/10 per cent of the total burnable property.

Outside of the fire hazard the practice has been used with profit by corporations engaged in the shipping business, especially when the corporation owns a fleet of small, relatively inexpensive ships. This policy of self-insurance should under

no circumstances be followed by corporations owning a few vessels, because sufficient distribution of risks cannot be obtained.

When the corporation owns forest property that cannot be insured a reserve for the fire hazard should be set aside directly from the general surplus. This is very important with paper and tanning companies owning their own woodlands. Ordinarily wages of fire wardens and rangers would be a direct charge to operation. But this kind of protection is not enough, especially if the corporation has a considerable proportion of its assets invested in timber lands. True, a reserve could not be set aside compatible with the premiums that a fire insurance company would feel compelled to charge on timber property, but some regular appropriation based on the cost of the stumpage must be set aside, else losses resulting from forest fires will be direct capital losses. Unless the corporation is fortified in some other direction such an unprotected loss may seriously affect the corporation's solvency.

**Investment of Insurance Reserves.**—It is obviously reasonable that the special insurance reserve and the ordinary insurance reserves resulting from the accumulation of annual allotments from earnings should under no circumstances be invested in property subject to the same hazard as the property for the replacement of which the fund is maintained. A shipping corporation, for example, carries its own insurance. As a result of this policy, \$2,000,000 has been accumulated from premiums with which the corporation has charged itself, and in addition it has set aside \$50,000 a year for ten years from its general profit and loss surplus to care for "war or other unusual losses." It is evident that these two funds should not be invested in any kind of property subject to the marine hazard. If the railroad corporation insures its own stations, the fund should not be invested in station property; if a grain



company insures its own elevators, then the reserve is not to be placed in elevator property. This policy must be rigidly and scrupulously followed, else the whole principle of insurance reserves breaks down. And it is difficult to observe. Most business men are familiar only with their own or allied businesses, seldom with the general investment business. Moreover, if the insurance reserve funds accumulate in considerable amounts there is always a temptation to use the money for the general purposes of the corporation, where, unquestionably, it will earn more than in low-interest-paying readily marketable securities. The latter are the only wise media for insurance reserve investments. A desirable arrangement is about one-fourth of the fund in bank certificates of deposit payable 30 or at most 90 days from demand, one-fourth in active, listed first mortgage railroad bonds, and the other half in municipal and government securities. If such an arrangement is followed little care will need to be exercised by the treasurer of the corporation in the investment field with which he is unfamiliar, and a large proportion of the fund will be immediately realizable in cash if unusual losses make demands upon the fund.

Because a plant in working order is essential to the conduct of any business and because fire hazards are within the range of probability, the reserves set aside for insurance, to be used only for plant rehabilitation, must be kept invested outside the risks of fires incident to the business. They must be available at any time. Under no circumstances should they be treated as ordinary surplus reserves which may be invested in the business. The insurance reserve fund investments of the United Fruit Company, for example, were carried in large proportion in "high-grade first mortgage railroad bonds." Through a series of years, from 1901 to 1914, the company averaged over 10.7 per cent the capital invested in its regular business; but owing to the necessity of holding the fund in liquid form, it realized only 4.3 per cent on its insurance reserve.

3. **Reserves for Unremunerative Improvements.**—A third set of reserves must be set aside to meet the large expenses incurred in complying with changed social and public requirements. There may be considered unproductive or unremunerative improvements. They represent the costs incident to complying with a more enlightened social consciousness, either in the direction of greater safety, greater convenience of the public, a keener social morality, or even a more critical sense of communal beauty and fitness. As a class the expenses are very numerous—ornamental street lights, fire escapes, automatic signals, “welfare” improvements, “full crew” laws, contributions to hospitals and public improvement funds. When these expenses are individually small they are merely charged against the ordinary costs of operations and require no further comment. But certain of them are very large, such as elimination of grade crossings, paving between tracks, burying of wires, extensive ornamental lighting systems, elimination of smoke, fumes, and odors. These are all unprofitable, in the view of the corporation’s system of accounting, in that they do not lead to an increase of earnings. The only logical method of treating such expenditures is that of creating a reserve fund for them through annual appropriations from the general surplus. The obvious difficulty in making these appropriations is the evident uncertainty of the cost and frequency of such unprofitable improvements. This difficulty is unquestionably real, but it can hardly be advanced against the wisdom of the policy. This idea is admirably expressed by an engineer referring especially to traction companies:

Every company occupying public ways is confronted with the certainty that they will be compelled to make costly changes of plant owing to changes made in state or municipal regulations. It is proper that a company should make annual appropriations to provide funds to meet obligations arising from such causes.

The question naturally arises as to whether some of the cost of the unprofitable improvements may not wisely be written off during a term of years following the completion of the enterprise. If such a policy be followed it will be necessary to carry forward a part of the cost as deferred asset, to be gradually extinguished during the term. Such a policy may have the advantage of being more certain and definite in its demands than that of creating a reserve fund, but it has the glaring defect of throwing the entire expense into a relatively short period or prolonging indefinitely the deferred asset. Moreover, since the cost cannot be transferred onto the shoulders of the community by an increase of rate, in the case of a public utility, it is probable that the period following the improvement is no better able to bear the expense than the preceding period. Were it possible to increase the rates for service or otherwise increase the earning power of the corporation by reason of the improvement—as water companies sometimes do on the erection of a filtering plant—the improvement would not be unprofitable and hence would be outside the present category.

**4. Reserves for Business Uncertainties.**—The last, and in a sense the vaguest, group of special reserves that should be set aside from the general surplus is that to care for abrupt changes in the demand for the product. It is certain, however, that when large earnings have resulted from abnormal conditions which are of a relatively temporary character and over which the management can maintain no control, some reserve must be set aside to fortify the corporation against losses when conditions become unusually unfavorable. Difficult as it is to determine any average reserve that must be set aside in abnormally prosperous years, it is even more difficult to determine under what conditions such a reserve should be utilized. Clearly the purpose of setting aside the reserve in

the prosperous years is to afford a fund to equalize the excessive production costs or even the deficits during years of abnormally small earnings. But what shall be the criterion which shall determine whether or not a bad year is so bad as to permit the management to draw on this reserve to offset its losses? There is no infallible foresight. No invariable rule can be laid down, and even if it could the decision in any given case is linked with other matters of general financial policy, such as the need for maintaining the credit of the corporation and the general dividend policy.

Perhaps the most good that such a reserve can accomplish is the psychological influence exerted on the directors and the stockholders by the recognition and acknowledgment of the principle that abnormally large earnings are almost invariably coupled with abnormally small earnings. The admission of this general economic principle must act as a deterrent to prevent the dissipation of assets by the payments of excessive dividends or the unwarranted expenditures for new construction. The losses of many corporations in the depression following immediately after the Great War were in some cases so great as to extinguish not only the large war profits but also the accumulated reserves of a lifetime. The automobile tire companies lost more in the sudden decline of their inventories than they had made during the war; several would have been forced to confess bankruptcy had it not been for the saving help accorded them by bankers. During a period of twenty odd years the Quaker Oats Company accumulated a surplus which stood at \$5,300,000 on January 1, 1920. This was practically all extinguished by losses—chiefly in inventories and unwise commitments—during the last four months of 1921.

## CHAPTER XVI

### STOCKHOLDERS' SURPLUS

**The Principle of Dividend Disbursement.**—That which remains of net profits after all interest charges have been met and all special reserves set aside may be used by the stockholders as their directors see fit. It may be called the "stockholders' surplus." The directors must, however, determine what proportion of this surplus should be paid over to the stockholders. Many and varied considerations tend to influence the directors in determining the proportion of the total net surplus that may expediently be distributed among the stockholders and the proportion that should be kept in the business. This question is in the end not one of the theory of accounts or of business law or even of universally applicable financial principles. It is purely one of individual business expediency.

Underlying this principle of business expediency, as an inflexible rule, is the clearly established principle of law and finance that dividends may not be declared out of capital. The law, apparently, interprets capital somewhat roughly and does not rigidly insist that proper depreciation charges shall be set aside before computing net profits. But it has made it clear that there cannot be a direct payment of dividends in excess of what we have here called "gross profits." Further than this there is absolutely no statutory or other principle of law that determines or even concerns itself with the proportion of the gross or net earnings that may be paid to stockholders.

**Avoidance of Misrepresentation.**—There is no other principle of law, one ought to add, except the principle of law and common morality that the declaration of dividends should

not be based on misrepresentation, as when earnings are overstated, in order to present an accounting justification for the payment of unearned dividends. It is unnecessary to state that unearned dividends shall not be paid to vindicate a bad management, to maintain the market price of a company's stocks, or to maintain the legality of the company's bonds among savings banks, or to sell bonds at a higher price than actual earnings would justify.

In the past many railroads have been guilty of such deceits: and one of the clearly apparent advantages of a uniform system of railroad accounting has been to make this particular species of misrepresentation more obvious and more certain of discovery. But another kind of misrepresentation sometimes indulged in is that of withholding, by the directors, of information concerning dividend action. The most notorious case of this kind is that of the action of the Union Pacific Railroad's directors in August, 1906. By reason of large hidden earnings of the Union Pacific's subsidiary, the Southern Pacific, the latter came in the summer of 1906 into a position to pay dividends into the treasury of the Union Pacific. Accordingly the directors of the two roads met simultaneously. The Southern Pacific directors declared an initial dividend of  $2\frac{1}{2}$  per cent and immediately thereafter the Union Pacific Railroad's directors raised its semiannual dividend from 3 to 5 per cent. But this action was rigidly concealed for two days. Meanwhile tremendous activity occurred in the market for the company's shares. More recently the directors of the B. F. Goodrich Company concealed a dividend action on the preferred shares for a period of six weeks. During this period the stock fell from \$89 a share to under \$74 a share. The story was told and commented upon in the New York Morning Post in the following way:

On Wednesday of this week, in the formal announcement to preferred shareholders of the B. F. Goodrich Company that the

regular dividend of  $1\frac{3}{4}$  per cent had been declared on their stock, the statement was made that this dividend was declared six weeks ago, on October 22. Harmless as the statement appeared to be, it brought such serious criticism against directors of the B. F. Goodrich Company that the extreme means of punishment was suggested of removing the Goodrich shares from the Stock Exchange list.

For, by withholding formal announcement of their dividend action until this week, directors of the Goodrich Company permitted the preferred shares to fall in price from 89 to  $73\frac{3}{8}$ , investors in the company and Wall Street speculators selling the stock through the month of November on rumors that the dividend was to be cut or passed.

The fact that no way has been found for punishing those guilty of the Goodrich episode has not lessened the indignation that is felt at the entire episode; rather it has led to a general demand on the Stock Exchange for a rule that will in future make it compulsory for all dividend announcements to be made within forty-eight hours after they are declared. Another need it has emphasized is that of more and better laws governing the management of corporations. The Goodrich incident has uncovered an old condition wherein certain directors admit they knew nothing of what other directors were doing. The Goodrich dividend was declared on October 22, at Akron, Ohio, by a quorum of the board. Not until this week did certain of the other directors know the dividend had been declared. Here is a condition disclosed which clearly needs remedying.

Such cases of direct or constructive misrepresentation are, fortunately, sporadic and call forth the condemnation they deserve. In every direction there is a growing demand that extreme care be exercised that all representations concerning earnings and dividends made by a corporation's directors to its stockholders shall be not merely technically true but implicitly and unequivocally true.

**Reinvestment of Surplus in the Business.**—A noteworthy and, from the economic point of view, a very significant dif-

ference between various kinds of business lies in the rapidity with which the capital is turned over. There are three points of view from which this phenomenon may be analyzed. One is the length of credit required to safeguard invested capital, another is the sensitivity to changes in industrial conditions, and a third is the relative quantity of fixed capital necessary to meet the requirements of an increasing volume of business. This last is of moment in this question of dividend policy. A remarkable contrast between the great industrial combinations and the combinations in the railroad and public service fields lies in the fact that a large proportion of the former have issued no new securities since they were promoted. Indeed, instead of seeking new capital for improvements and extension they have, in very many cases, gradually absorbed the excess of capitalization that characterized their promotions through the steady, almost unnoticed, reinvestment of earnings in improvements to their plants. Each has been, for its capital requirements, sufficient unto itself. The expansion of the large railroad systems and public service enterprises present striking contrast. As their gross business has increased, plants have expanded many fold. A slight increase in their gross income requires a vastly greater increase in their investment in permanent property. And this increase in fixed capital is all out of proportion to the net earnings likely to arise immediately from the enlarged property and the increased business.

The shoe manufacturing business and the hydroelectric power business, are perhaps the extremes of the series. In the former case the machinery is leased from the United Shoe Machinery Company—thus involving no capital investment. Even the building or "shell" may be rented. As a result the shoe manufacturer may plan to turn his capital at least once in two months—six times a year. In case a considerable proportion of the capital required in the business is furnished by banks and merchandise creditors, the rate of turnover of the pro-



prietor's own capital may be even greater. A large hydro-electric power dam costing \$10,000,000 is likely to earn about \$1,000,000 gross a year—often even less. It "turns" its capital once in ten years. The ratio of rapidity of turning capital in these two industries is thus at least 60 to 1.

The great importance of this simple fact to questions of dividend policy is that corporations which turn their capital slowly should be prepared to reinvest earnings in their plants, as the large sums required for plant improvements cannot be counted on for a certainty from outside sources. The investment markets may be suddenly closed upon them when they are most in need of new capital and their only recourse is to their own earnings. During the late summer and early autumn of 1914 when the hostilities of the European nations were the predominating element in all problems of finance, when the exchanges all over the world were closed, and when money in large sums could not be obtained by private corporations at any reasonable price, many companies with insufficient money in their treasuries to meet their usual requirements passed their dividends in order to maintain a kind of reserve in case their plans for new construction should be interfered with by the stringency of the money market. This policy was adopted by many public service corporations which had undertaken large extensions of plant without the full amount of capital in hand. Such a policy was unquestionably wise in view of the disturbed conditions of the world's markets, but might be criticized by the stockholders who could easily persuade themselves that the war would be of short duration and that therefore the stockholders could claim the full payment of dividends as a matter both of right and expediency.

**Confidence in Accounting Methods.**—As suggested several times before, accounting methods are efforts to state precisely—or rather with that degree of precision figures make possible

—a set of varying, and in many cases intangible, economic values. So long as these estimates serve only as checks to actual conditions, errors in them are not vital. But should they mislead the judgment in distributing as net profit what was in truth capital, the consequences to the solvency of the corporation would be serious. To prevent such an overestimation of earnings it was insisted in the preceding chapter that reserves for various unknown contingencies should be set aside. But the vast majority of corporation officials will not insist on any such sophisticated precision regarding reserves for unknown events. They will prefer merely to keep some of the earnings in the business, so that if “something comes up” the corporation shall have a bulwark to fall back upon. Or, putting the matter more baldly, most corporation officials will not insist that special “earmarked” reserves be set aside for various unknown possible losses; but they will insist that they be given the unrestricted power to determine the amount of earnings to be kept within their control as a general reserve fund to meet the future vicissitudes of trade and public demands—vicissitudes which they only vaguely, but nevertheless consciously, recognize.

Furthermore, in addition to any possible losses which accountant and director alike might anticipate, it frequently happens that there are contingent events against which no system of accounting, unless omniscient, could protect the corporation. In the year ending December 31, 1913, the express companies were putting into effect the new and radically lower system of rates established by the Interstate Commerce Commission. No one could tell whether the cheaper rates would so affect the use of the express service that the receipts under the new schedules would increase or decrease the net revenue. At first there was a distinct dropping off of earnings. In the case of the Wells Fargo Company the total earnings during the year ending June 30, 1914, were clearly less than the previous

dividend rate. The dividend was reduced from 10 to 6 per cent annually, although the company's total earnings at the end of the year amounted to something over 9 per cent. The president of the company remarked in the report that the express companies were on trial, and that the safer policy to pursue was to reduce the dividends to well below the total earnings. The phrasing of this part of the report is worth considering.

Notwithstanding the net earnings from all sources for the year were nearly sufficient to pay the former rate of dividend, it was apparent that, for the time at least, the company's operations should be conservatively regarded as passing through a probationary period; and until the earning possibilities under the new conditions could be more fully demonstrated, the Board of Directors decided to reduce the dividend rate.

Yet when all is said, the whole question of the proportion of profits to be retained in the business must rest with the judgment of the directors themselves. In the end, it is true, the "horse sense" of the average corporation director will prescribe a reserve to be "left in the business" which will approximate—and quite often exceed—the sum of the various reserves which the accountant would insist upon from his elaborate sophisticated guesses. It does not matter to the well-being of the corporation whether the proportion of earnings retained in the business to safeguard it against the vicissitudes of an unknown future is computed by the laborious and intricate calculations of the engineer and the accountant, guided by a "law of averages," or is merely guessed at by shrewd men on the basis of a long and varied experience of business, provided only the amount held back be ample. And it is distinctly to the credit of the majority of American business men who reach high managerial positions, that their natural insight enriched by a wide experience is sufficient to protect the stockholders against their own avarice in demanding larger dividends than prudence justifies.

**Regularity of Dividends.**—Far more subtle is the requirement that dividends shall be constant and regular. It is more subtle because it depends on the interpretation of business policy by large groups of stockholders and by the general public, who, by their approval or disapproval, can make or mar the general credit of the corporation.

The question—already discussed—of the accuracy of predictions of earnings underlies questions of the regularity of dividends also. At one extreme is a private water company the earnings of which may probably be predicted within a very close margin of error. At the opposite extreme is a manufacturing concern making some specialty machinery, where earnings are subject to abrupt, violent, and unpredictable fluctuations. The specific solution of the problem, then, is inherent in the character of a business. For that reason it can be discussed only with reference to specific businesses, and this is the task of the succeeding chapter. But the general question as to the expediency of making regular dividends is one which applies to all corporations.

This regularity of dividend payments helps the corporation in two very important respects.<sup>1</sup> It creates a loyal group of stockholders who hold their stock for investment and not for speculation. They have confidence that the directors will not give them good cause for assuming that a policy of regular dividends is to be followed, and then break the understanding at the first excuse.<sup>2</sup> It also creates a strong credit to be utilized for borrowing in the open market. In the former respect the value of a record of regular dividends can hardly be overestimated. The common stocks of the Great Northern, the Pennsylvania, the Chicago and Northwestern, among railroads; the American Telephone and Telegraph, the Pullman, the United Gas Improvement, among large public utility companies, enjoy a confidence from the conservative investing class due primarily to their long records of regular dividends.

Besides strengthening the investment position of the company's stocks, few facts help the sale of its bonds more than the statement that it has paid regular dividends of 4 or 5 or 6 per cent for the last ten or twenty or thirty years. A dividend record showing large disbursements during years of prosperity and passed dividends during the depressions, stamps the stock as speculative, and investors tend to associate the stock and the bonds together in one category. Few instances show this more clearly than the case of the American Can Company, the stocks of which had deservedly acquired the reputation of being a mere gamble. When the bankers sought to sell an issue of bonds of the company to the investing public they found themselves confronted by the evil reputation of the company. Its abrupt fluctuations in earnings, reflecting themselves in an uneven dividend rate, coupled with certain notorious stock market manipulations, had so impressed themselves on the public that no careful investor cared to associate his money with the enterprise, no matter how great the apparent security of the bonds. Another case in point is that of the United States Rubber Company. During the year 1914 the net earnings were reported to be over \$12,000,000. The primary security was the collateral trust 6 per cent bond due in 1918. At first glance this appeared to be an industrial bond of unquestioned security, with interest charges earned ten times over. Yet it sold continuously on a  $5\frac{1}{2}$  to 6 per cent basis, a much higher yield than other quick-maturing industrial bonds of equal apparent security. The 8 per cent dividends on the first preferred stock were earned nearly twice over, and the stock sold so as to yield the investor from  $7\frac{1}{4}$  to  $7\frac{7}{8}$  per cent. In contrast, the United States Steel Corporation earned its bond interest hardly twice over, yet the corresponding premier security was selling to yield the investor less than 5 per cent. The corporation failed by nearly \$2,000,000 to earn the dividend on the preferred stock, yet the stock sold throughout

the year so as to yield the investor from  $6\frac{1}{5}$  to  $6\frac{4}{5}$  per cent. The primary reason for this anomaly was that the management of the United States Steel Corporation had the reputation of being open and straightforward with its stockholders.

Once the dividend has been fixed and designated as a "regular" dividend, care should be taken that it be fully maintained under all ordinary circumstances. For this reason the management should use care that a proportion of the bookkeeping surplus set aside during years of liberal net profit should be invested in quick assets easily converted into money for the payment of dividends during years of depression. The American Shipbuilding Company failed to observe this cardinal principle and felt compelled to pass its preferred dividend the first year of depression in spite of the fact that there had been accumulated a bookkeeping surplus almost equal to the par value of the preferred stock. It had been entirely sunk in long-term—many of them unproductive—improvements and lost to the stockholders. The directors faced this unpleasant fact and courageously effaced from their books over \$3,500,000 of bookkeeping surplus—over half the apparent surplus.

**Prediction of Earnings.**—The prediction of earnings is not quite as difficult for an old-established business as for a comparatively new business. Investors in New England public utilities have realized this during the last decade. Earlier in the chapters dealing specifically with new enterprises, various principles were suggested that enabled promoter, banker, and investor to make intelligent guesses concerning the future earnings of new enterprises. But in the case of old-established companies having their own experience to guide them, there are ample data available to make the dividend policy of a corporation, based on future earnings, something more than a mere intelligent guess.

Common presumptions and "street proverbs" regarding the

regularity or irregularity of corporate earnings cannot always withstand critical analysis. It has always been assumed, for example, that public utility earnings are more regular than the earnings of industrial enterprises. This is undoubtedly true under ordinary circumstances, but it is also undoubtedly true that the earnings, both gross and net, of many utilities underwent more abrupt fluctuations during the Great War than the earnings of many industrials. The latter could raise their selling prices as their costs advanced, whereas the utilities, dependent on the slow routine of public commission, found themselves ground between fixed rates and rising costs.

In general it will be observed that the business supplying a commodity which is sold directly to and immediately used by the ultimate consumer, has a more stable earning capacity than a business which produces goods to be used by other businesses in the production of something else. For example, a business which produces matches and sells them to the public is of the first type. Its goods are sold directly to the consuming public. They are immediately used up. No consumer acquires more than a limited supply of matches, and they are a negligible item in his total expenditures. The consumer does not, therefore, buy matches liberally in times of business activity when he "feels rich," nor does he curtail his purchases of matches during a business depression. The sales, therefore, of a match factory are independent of business depressions. True, like all manufacturing businesses, the earnings will fluctuate in accordance with variations in the skill of management and the ordinary hazards of any business enterprise. This is admitted. But if there is a relative uniformity in the skill of management, the gross sales of matches and the resulting net profit should be relatively constant.

The business of manufacturing locomotives, on the other hand, meets just the opposite conditions. A locomotive is not used up. It is not sold to the ultimate consumer, for the

ultimate consumer is not the railroad, but the railroad's patron. The locomotive is merely, in itself, an instrument of production. Unless there is freight to be moved it is valueless. Railroads will use their old locomotives during periods when there is reduced freight movement; they will rush into the market to purchase locomotives as soon as an industrial boom increases their volume of freight receipts beyond the wonted capacity. In consequence the manufacturer of locomotives will make few sales during the period of business depression and the earnings of his business will be small, no matter how much skill of management he may exercise. And, conversely, the sales of locomotives during periods of great business activity will be very large, and the earnings will be exorbitant, irrespective, almost, of the business skill of the manufacturer.

This difference in the relative constancy and variability in the earnings of two types of corporations is further intensified by differences in price of the commodities sold. The lower the cost the more stable the earnings; the higher the cost, the greater the fluctuations in earnings. Again this principle is further modified by the relative importance of the commodities manufactured and sold. Notwithstanding matches and sealing wax are both low-cost commodities sold to and directly consumed by the ultimate consumer, they are not equally necessary; notwithstanding locomotives and automatic lathes are high-priced commodities sold to railroads to be used in producing transportation service, they are not equally necessary.

From these observations it will be possible to formulate a general law: *Earnings of corporations engaged in the production of inexpensive necessities, sold to and immediately consumed by the ultimate consumer, are most regular and most subject to reliable prediction; earnings of corporations engaged in the production of costly commodities, sold to other producers and not absolutely necessary for the operation of their busi-*



*nesses, are least regular and least subject to reliable prediction.* These are the extreme cases. Between these extremes lie the majority of corporate business, and the relative predictability of their earnings will be determined according as they tend toward one extreme or the other.

**An Empiric Illustration of the Law of Earnings.**—This law has ample justification in experience. It is empirically illustrated by the two commodities already cited—matches and locomotives. For the purposes of illustration it is fortunate that these two commodities are manufactured by large corporations whose earnings are matters of public record. In the whole history of American industrial consolidations it is probably impossible to find the earnings of a single large business as constant, uniform, and “smooth” as those of the Diamond Match Company during a period of sixteen years. The company was doing millions of dollars of gross business. Yet in 1900 the net earnings were within less than \$100,000 of those of 1915. The panic of 1907 had absolutely no effect on the net earnings, and the “boom” period of 1905 to 1907 could not be detected from an inspection of these earnings. Even large public utilities, even water companies, whose earnings are proverbially constant, can hardly show a record of regularity and stability of earnings equal to this.

In contrast to the regularity of these earnings are those of the American Locomotive Company, covering essentially the same period, except that the last three years of the Great War are included. (The company was organized in 1901.) Its net earnings dropped from \$5,000,000 before the panic of 1907 to \$1,000,000 immediately afterward; it endured an actual manufacturing loss of \$1,000,000 in the first year of the Great War and then a net profit of \$11,000,000 the year following. The extreme fluctuation in the net earnings of the American Locomotive Company in itself in nowise affects the policy of

paying regular and dependable dividends. This company has paid the 7 per cent dividend on its preferred stock every year since it was organized in 1901. In two of the years, 1909 and 1915, the preferred stock dividend was not earned. It was paid nevertheless. And this course was eminently wise, because the reserves accumulated during years of large earnings were ample to safeguard the general credit of the company.

**Extra Dividends.**—If a conservative policy of regular dividends is followed, it is reasonable to expect that more money will accumulate in the undistributed profits account than the usages of the business warrant. Under such circumstances the directors may feel warranted in declaring an additional distribution in excess of the regular dividend. This should be called an “extra dividend” to indicate to the stockholders that the interest is not regarded by the directors as permanent. Some corporations have gone so far as to have a separate check made out for the extra dividend, so that under no circumstances will the stockholder confuse the additional payment with the regular payment, and especial care should be exercised by the directors that the extra dividend is not made the occasion of stock manipulation or misrepresentation.

**Bond and Scrip Dividends.**—In the few cases in which it seems advisable to declare a dividend, although the money cannot be readily withdrawn from the business, it is customary to pay the dividend in some form of security. This may be either bonds, scrip, or stock. A bond dividend is rarely used. “A scrip dividend,” as one writer aptly puts it, “divides the profits but defers the actual distribution of the assets.” The most plausible excuse for the issue of scrip dividends is that, owing to general business uncertainty, the corporation prefers to hold the money in its treasury rather than to distribute it among its stockholders. But there are numerous cases, especi-

ally among public service holding companies, in which this scrip dividend is a mere device for postponing the unpleasant confession that the company is without sufficient resources to pay any dividends at all. By questionable methods of accounting which neglect adequate depreciation and other reserves, it may be made to appear that the business of the year has yielded a net profit. The management then points out that the demands of the business were such that the year's profit was absorbed by the heavy new construction which increased the value of the property assets. On the basis of this apparent increase in the property account, the management purports to feel justified in incurring a new liability in the form of the scrip dividend. The process may be repeated year after year, and as no real money is paid out in dividends, the actual operation of the company is not hampered. Ultimately the deceit will be discovered through the uncovering of the fictitious figures at which the property account is carried, but in the meantime the managers will have been able to maintain the stock at a market price higher than if no dividends whatever had been paid.

**Stock Dividends.**—The commonest and most important of security dividends are stock dividends. These as a class owe their origin to financial success. Scrip dividends quite generally are substitutes for cash dividends and therefore an outward sign of at least temporary weakness. But this, except in rare cases, is not true of stock dividends, although a desire to effect a speculative and unjustifiable enhancement in market price is often the dominating motive in leading directors to declare stock dividends. In other cases the wisdom of declaring stock dividends is very much open to question, notwithstanding the fact that such dividends may be fully justified by the books of account of the corporation. And in general we may lay down two guiding principles, one of accounting and the other of general business expediency, which should control the decla-

ration of stock dividends. Both of these are of considerable importance.

1. The bookkeeping procedure in connection with the declaration of a stock dividend should consist merely of a transfer of an amount sufficient to cover the new issue of stock, from the surplus account—accumulated through annual profits—to the capital stock account. If this principle is carefully observed and it is borne in mind that theoretically as well as legally no stock should be issued unless it represents property equivalent to the full par value of the stock, it follows that stock dividends should never be tolerated unless the actual earnings to a considerable amount are employed by the management: (1) to construct new buildings and equipment, or (2) to increase the net quick assets in order to maintain or strengthen the general credit position of the company. Whether or not earnings shall be reinvested in property or paid out in dividends is merely a matter of business judgment. But that there must be actual earnings to do either, is fundamentally a matter of simple business honesty, to be expressed outwardly in the accounts. It is not a matter of judgment or expediency or anything of the kind, but of truth.

2. The other principle to be observed is that the stock dividend should not be declared, even when the invested profit and loss surplus is ample, if the credit position is not fundamentally sound. Although a stock dividend may not deplete the quick assets as a cash dividend does, it is an outward sign of an excess of capital in the business not in the least consistent with outside borrowings. If loans are floated at the same time that a stock dividend is issued, the latter is a false indication of financial strength.

**Taxation of Stock Dividends.**—The whole subject of stock dividends has assumed a new importance of late in connection with the income taxes of the federal government and several of

the states. Each of the income revenue laws attempts to tax income wherever and however it occurs, with the exception of certain specific exemptions. Stock dividends are not specifically exempted, so that both the federal and state income tax commissioners have tried to tax stock and security dividends. This has been done under the Massachusetts state income tax without serious objection from the courts, but the Supreme Court of the United States decided in two very important cases that stock dividends were not income. As a result much discussion has arisen, bearing partly on the economics of the distinction between capital and income and partly on the expediency and efficacy of trying to tax stock dividends.

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**Property Dividends.**—Another type of security dividend of considerable prominence since the large issues of Liberty bonds is that involving a distribution of securities held in a company's treasury. During the Great War many successful industrial corporations made large subscriptions to government bonds. At the same time they obtained extraordinary war profits. A considerable proportion of these war profits were paid over to the United States Treasury in the form of war taxes, but the remainder was still abnormally large. Yet instead of depleting their cash reserves or selling their Liberty bonds to secure working capital, these corporations paid special dividends in the Liberty bonds held in their treasuries.

In 1919 the United States government forced the packing house of Swift and Company to get rid of certain of its subsidiary companies engaged in food businesses allied to the packing business. The stock of these subsidiaries were distributed among the stockholders of Swift and Company.

The United Shoe Machinery Company acquired the stock of the Thomas G. Plant Company. The Plant Company was engaged in the manufacture of shoes—not shoe machinery—but its owner had threatened to enter the machinery line of

business. The purchase of the company's stock involved, therefore, merely buying out potential competition, but at the same time the Shoe Machinery Company found itself with the stock of a shoe factory on its hands. Accordingly it distributed the Plant Company's stock in the form of a stock dividend of \$6, par value, a share to its own stockholders, payable July, 1916.

**Summary of Sound Dividend Policy.**—In closing this discussion no more comprehensive summary of sound dividend policy can be found in the whole annals of American financial history than a certain resolution of the Board of Directors of the Union Pacific Railroad. An entirely new and very able management acquired control of the road at the time of its reorganization in 1897. During the succeeding two years large sums of money were expended in betterments. Control of connecting roads was acquired at low prices and through able management enormous equities were built up for the benefit of the Union Pacific Railroad. And the gross and the net earnings had increased by leaps and bounds so that the general credit of the road was becoming firmly established notwithstanding its previous unfortunate history. Yet the directors, on the crest of this initial prosperity, refused to pay the full dividend on the preferred stock and passed a resolution which began as follows :

Whereas the company has been in possession of all its main lines barely a year, and of its branch lines a less time, and is therefore without a basis of experience for determining any fair average of results for unequal years, and it is not deemed advisable to add to the bonded debt, but to continue a liberal application of surplus income to permanent improvements and additions and to such uses as will secure economy of operation and increased earning power, and thereby establish stable and permanent values for its securities and a reasonably safe minimum basis of regular dividends to its stock.

This is sound finance. And the marvelous success of the Union Pacific Railroad during the following decade is the strongest kind of empirical proof of the wisdom contained in this resolution.

## CHAPTER XVII

### BUSINESS EXPANSION AND THE LAW OF BALANCED RETURNS

**Ultimate Success or Failure.**—A business corporation is either a success or a failure. Although a business may maintain for a considerable time a quiet existence showing no outward change, yet in the long run an observer will see clearly that it has gone either forward or backward. Many corporations go down-hill very rapidly and become failures within a few months after their promotion; with others the causes of disaster take longer to operate and may not precipitate failure for several years. The failure of the old United States Shipbuilding Company, now the Bethlehem Steel Corporation, followed so quickly after its promotion that it is difficult to say that the company had any real existence of its own, whereas, the causes behind the failure of the International Steam Pump Company in 1914 were present from the organization of the company in 1899, yet by the aid of temporary loans and less obvious palliatives they were obscured from the outside until the autumn of 1913. The same thing is true of the success of a corporation. In fact, as the first few years are devoted to organization and to establishing a place in the trade, pronounced success is not likely to show itself so early as pronounced failure. Yet in the long run it is just as evident as failure, although the consequences may not, perhaps, be so dramatic.

The remarkable but sporadic success which certain manufacturing companies obtained through foreign orders for munitions soon after the outbreak of the Great War is not an exception to this rule. The success in most cases was only



apparent, not real, and vanished even before the contracts were executed. The vast majority of those corporations which profited greatly by the war were already successful or else had developed a highly efficient productive organization before the war.

**Personal Motives Leading to Expansion.**—If the corporation is a success the directors are prompted to think of increasing the capacity of the business. They will urge the likelihood of increased profits as the reason for doing this; but behind such a reason will be others. The impelling springs of human actions are difficult to fathom. Business managers are human beings. Their solutions of the difficult problems of business expansion are not always determined solely by economic expediency.

**1. Ambition.**—The most powerful motive in leading to a desire to expand a business is the illusion of valuing oneself in terms of one's setting. The bigger the business the bigger the man. This motive is much more fundamental than is usually realized. A man who operates successfully a corner drug store may be content with the business as it is, provided he finds the field of his primary interests outside of his business—home, sport, or an avocation. In such a case, which is common, the business is an insignificant means to an end. It is not a part of the real life of the man, but merely an attendant circumstance in the problem of extracting a livelihood out of a competitive and unsentimental world. But such men are not true business managers in the sense that the economist uses the word "manager" or "entrepreneur." Their field of achievement is not business success. Men who can be classified as business managers and who value success in productive enterprise as something worth while in itself—rather than as an insignificant means to a greater end—want their business

undertaking to bear the outward signs of successful achievement. Increasing size is the most obvious of these signs. The race-old instinct of conquest becomes translated in our twentieth century economic world into the prosaic terms of corporate growth. Business expansion is the spirit of a modern Tamerlane seeking new markets to conquer. Business is a pawn for human ambition.

**2. The Creative Impulse.**—A second motive, less significant, one is led to believe, is the creative impulse. A business manager has an aversion to stagnation; he wishes to be constructive. He wishes to make actual the vague images of progress. The only field with which he is familiar is his business, and in the fortunes of his business he sees the realization of his ideals. It is a commonplace of psychology, current since the brilliant introspective studies of the elder Mill and Reid, that somewhere in the mental structure of all of us lies the impulse to build, to see our ideas take form in material results. The impulse to build is at the same time an important element in inventive and artistic genius and in skilful craftsmanship. The particular form in which it finds expression is, among men of ordinary ability, certainly a matter of accident. And the particular form close at hand to the business manager is his business. A distinguished business manager, at sixty-nine years of age, to whom wealth had ceased to have a significance, was heard to outline in detail for an already well-rounded and worldwide business, steps in reconstruction and enlargement which would ordinarily take a lifetime to achieve. An expanding business affords a sphere for the kind of creative expression demanded by our twentieth century industrialism.

**3. Desire to Speculate.**—A third motive is the satisfaction in taking speculative chances. Business managers like to deal with a future full of concrete uncertainties. They like to apply

direct empirical tests to business policies the results of which are at best uncertain. The development of constructive plans partakes of the nature of a game, and all men enjoy the game they think they can play.

### **Application of Diminishing Returns to Manufacturing.**

—Brushing aside the non-humanistic aspects of business expansion the question ultimately narrows itself down to one of economic sanctions. Expansion will bring disaster unless the conditions of the industry and the particular business are such that the big business is at least relatively as profitable as the small business. This is not necessarily so.

It does not always pay to expand. In fact there is probably no other one policy which brings disaster to the old-established business more often than the putting into practice of the fallacious principle that profits necessarily expand as the business expands. Students of economic theory have restricted the application of the law of diminishing returns to agriculture and the extractive industries. And it must be admitted that the law, if such a name can be applied to a principle so vague and inexact, is best illustrated, empirically, by examples taken from these fields of industry. This is evident. It requires no wide knowledge of agriculture to observe that to double the labor or to double the fertilizer does not necessarily mean a double crop of potatoes or wheat or mushrooms.

Lately, especially within the last ten or fifteen years, economists have noted, however, that the economies of large-scale production, particularly when spread over many widely separated plants, have not been realized to anything like the extent that was anticipated. In some notorious instances they were not realized at all; the product was so much smaller relatively in the large-scale than in the small-scale production, that the entire business resulted in a financial loss. This suggests that the law of diminishing returns, heretofore applied to those kinds of

production in which a natural resource is the constant factor and labor and capital the variables (like agriculture and mining), can be applied to manufacture if only varying quantities of the factors of production, capital and labor, can be empirically studied in their effects on the quantity of production.

### **Constant Labor Costs and Varying Capital Costs.—**

The shoe industry affords numerous illustrations of varying costs of fixed capital under a constant of labor costs. The following case is highly instructive. A certain man had had long training in the business. He had accumulated enough money to operate a small factory with rather antiquated and inefficient equipment. In this he was highly successful. Spurred on by his success he built a modern factory to manufacture the same grade of shoes. Indeed, so complete and perfect of its kind was the new factory that it was distinctly a "show establishment" among those making that particular grade of shoe. The output or quantity of product was very much greater than in the previous factory, although the same scale of piece-work wages prevailed. He failed, losing in a short space of time practically all that he had made under the previous conditions. He exercised the same entrepreneur ability in both factories. The labor costs per unit of product remained as constant as a set of actual conditions would permit. The fixed capital costs only varied. But in the second case they were so much greater proportionally to the cost of labor that the total cost of the product exceeded the competitive price value determined by other smaller and technically less efficient factories. In brief, the fixed capital cost was too great for that particular line of product.

And the manufacturers of the different grades of shoes illustrate varying quantities of products produced under conditions of varying quantities of capital investment. The highest grades of shoes are "fine turns," ladies' wooden heel "fancies,"

and gentlemen's fine custom lasts. These industries are confined to the small personally superintended shops of Haverhill, Brooklyn, and Newark. They are the nearest approach to the old-fashioned custom shops where a few dollars' worth of tools was all the shoemaker required. At the other extreme are the large capitalistic establishments of Brockton, Manchester, and St. Louis, manufacturing the cheapest kind of shoes in immense quantities. These companies had introduced very many economies of large-scale production, but at enormous cost of equipment. It would be as impossible for a Newark shop to make low-grade men's shoes economically as it would for a factory devoted to cheap shoes to turn out a Newark shoe. Each is successful in its own line because it has solved the problem of the balance between the labor cost and the fixed capital cost. But the balance is determined by the size of the output, or rather by the quantity of product most economically produced. Should the Newark shop introduce the large-scale efficiency methods in the endeavor to increase the quantity of its product it would turn out so many "seconds" as to ruin first its reputation and then itself. Should the large-scale factory try to reduce its fixed capital expenditure by substituting more labor for costly equipment, either its labor costs would rise higher in proportion—thereby increasing the cost of its product—or else the quantity of its product would be reduced—thereby increasing the pro rata costs of the fixed capital and overhead and therefore the costs of the product. In other words, the Haverhill, Brooklyn, and Newark manufacturers (at least those who are permanently successful) have discovered that nice and delicate balance between the ratio of labor and capital costs on the one hand and the quantity of their output on the other. They have discovered that with small capital costs proportional to the total value of the product they must adopt small-scale production. And the great highly organized factories manufacturing

cheap shoes have also discovered their own proper balance—that with a large proportion of fixed capital costs in the total cost of the shoe they can adopt large-scale production. The manufacturer described in the preceding paragraph, who was successful with a small cheaply equipped inefficient shop but unsuccessful with a large expensively and efficiently constructed shop, had not discovered the proper balance for his particular grade of product—the proper scale of production for the most economical ratio of capital and labor required by his particular grade of shoe—therefore he failed.

### **Constant Capital Costs and Varying Labor Costs.—**

Turn now to the other set of observations, dealing with cases where the costs of capital remain constant but the quantity or cost of labor varies. A highly instructive series of such cases is afforded by those metal and munition manufacturers who accepted large-scale orders from belligerent governments at the outbreak of the Great War. The American manufacturers, especially in the metal industries, were lured into taking foreign government orders by high prices and the expectation of liberal profits. They were forced to use their existing plants, although in some cases additions were hurried forward even by searchlight. Increases in equipment were not, however, important in the first hectic rush; so that we are dealing with a rather unusual condition of a constant quantity of fixed capital yielding a product under markedly varying quantities of labor. In many cases the labor was doubled, in some cases even trebled, changing from one 10-hour shift to three 8-hour shifts. Labor was increased intensively. More helpers were assigned to each master; there was greater division of labor and elimination of special work. The results were a disappointment to the managers. The product was not increased proportionally. Three shifts did not produce 2.4 times as much as a single 10-hour shift; the increased

intensification of labor within the shop did not make a corresponding increase in the quantity of the product.

If the matter were allowed to remain there, the failure of our manufacturers to meet the sudden and very unusual demands put upon them by the war would be attributed to the rôle of the law of diminishing returns in modern industry. But the experiences of the munition and metal manufacturers were various. In some cases, as with the manufacturers of timing devices for shrapnel shells and of other materials requiring fine handwork, the disaster which befell the contractors was worse than that of other larger establishments taking contracts for the kind of war material that could be turned out largely by machinery. The little Connecticut or Vermont shop that undertook the handwork subcontract was ruined, whereas the Bethlehem Steel Corporation, the Westinghouse Electric, and Remington companies merely made less money than was anticipated. The handwork shops attempted large-scale production by merely increasing the quantity of labor, and disaster overcame them immediately. The establishments already committed to the manufacture of products in which the cost is largely one of fixed capital, plants already large-scale in comparison with the others, were able to increase yet further their scale of operations without serious loss. And it is notable that the particular steel company which suffered at the beginning the largest relative curtailment of anticipated profits, the Crucible Steel Company, has, more than any other of the large steel companies, a considerable labor element in the cost of its product.

**The Law of Balanced Return.**—It appears that when the quantity of labor to be applied to a given constant of fixed capital is varied, different types of industry respond differently to the changes. If the industry manufactures a product in which the labor element is large, the quantity of that product

cannot be increased by increasing the quantity of labor, except at a very large increase in the cost of production. If, on the other hand, the product is one in which fixed capital is far and above the larger element in the final cost, then a sudden increase in the quantity of labor working upon the capital invested will not so seriously affect the cost of the product. The practical business man, with what he calls "horse sense," discriminates among manufacturing businesses according to differences in the quantity of labor that goes to make up the product. He says, "If you have little capital, go into a business with a good deal of handwork." This is another way of saying that sufficient special economies to enable the producer to sell in a free competitive market can be attained in a small-sized shop if labor predominates in the cost of production, whereas if the labor costs are relatively small only the shop capable of manufacturing large quantities of the product can survive.

Such comparison as this drawn from various industries lead to the conclusion that there is a point of maximum productivity as the quantity of labor and of capital is increased, but that this point varies in position according to the relative proportions of capital and labor represented in the final product. If the product is fine shoes, representing a large ratio of labor to invested capital, the point is reached in a relatively small scale of production; if it is inexpensive low-grade men's shoes, it is reached only under conditions of very large-scale production. This connection between the capital and labor involved may be stated in the following form, a general principle approaching the rigor of a law as near as the flexibility of economic phenomena permits. It is this: *The ratio between the quantitative values of labor and fixed capital in any unit or product determines the point at which increase in the scale of total production ceases to be economical; i.e., it determines the point of maximum productivity beyond which further investments of fixed capital and further increments of labor cease*



*to yield the same proportionate quality of product.* This may be called the "law of balanced return."

**Illustration of the Operation of the Law—I. In the Steel Industry.**—Numerous instances having to do with large- and small-scale production justify this principle in our actual experience. The most significant revelation of the history of industrial consolidation that followed the depression of the middle nineties was that the anticipated economies of large-scale production were not forthcoming. In certain industries, such as the steel industry, the divergence between theory and practice was not as marked as in others. But nevertheless, in spite of exceptions, the fact remains that the industrial consolidations based on the fundamental presumption of the economies of large-scale production were a profound disappointment to the student of economics and the practical business man alike.

In those types of industry where the human element is of small importance in the final product an increase in the quantity of labor applicable to capital could be made to keep pace with an increase in the capital even up to a point of an extremely large scale of production. This is now true of the steel industry. The fixed capital has become enormously large, but less and less does labor play a part in the final product. The very purpose behind the increase in fixed capital has been the substitution of mechanistic production for human. And as the ratio between the quantity of capital applicable to each unit of labor has increased, the scale upon which production can occur economically has increased correspondingly. In fact, so far has the successful substitution of machinery for labor been carried in the steel business that it affords to the minds of many students the best example in modern industry of economical large-scale production. It has been reported by four entrepreneur steelmakers of wide experience and acute

understanding, that no thoroughly economical establishment for the manufacture of steel and its simpler products can be built short of \$10,000,000. Coupled with this large scale of production is the fact that in the value of the final product the pro rata share of the fixed capital is enormous, while the direct labor costs are exceedingly small. That the labor costs are proportionately the smallest of any industry would be difficult to prove, but it is a matter of personal judgment that this is true. It explains, as nothing else can, why the American steelmakers, paying higher nominal wages than in any other steel industry of the world, can undersell their foreign competitors in neutral markets. Although the total wage received by each man is very high, the labor costs per ton of fabricated steel are very low, due to the extended use of machinery.

**2. In the Cotton Industry.**—The cotton manufacturing industry is one of the oldest in the United States. By the close of the nineteenth century there were a great many cotton mills scattered over the eastern states. They were particularly numerous in certain regions of New England, the vicinity of Baltimore, and in parts of the South. This concentration of many small units in certain localities was a circumstance which in many industries promoted the combination of small competitors into large industrial combinations. But in the cotton industry only three combinations were attempted, and all three of these proved failures. No combination was attempted in the fine and medium fine branches of the industry where the labor cost per pound of yarn or yard of cloth, exceeded the unit labor costs in the production of the coarsest grades of textiles. Cotton manufacturers predicted at the time each of these combinations was formed that the anticipated economies due to consolidation would not be realized. Some manufacturers predicted financial disaster for any combination of cotton mills which sought to introduce large-scale methods of production.

In the case of the Mount Vernon-Woodberry consolidation, which manufactured only coarse goods, using chiefly heavy looms and low-intelligence labor, it was admitted that the chance of success was greater than if a combination of New England medium-goods mills had been attempted. The reason given was invariably that all the economies of mere size of output could be obtained in a medium-sized mill, and that problems of maintaining a high rate of production presented almost insuperable difficulties in larger units or combinations of units. This judgment is so generally acknowledged among textile operators that it represents almost a consensus of experts. So far as actual experience is concerned the history of the three companies which attempted to secure the economies of large-scale production is highly instructive. The Mount Vernon-Woodberry consolidation of coarse-goods mills was consistently a failure for upwards of fifteen years, during which time other smaller duck mills of Baltimore county proved successful. After three successive reorganizations it was divided into two separate parts. Each part then passed under the control of a different and independent management. The New England Cotton Duck Company failed twice. Ultimately one mill after another was sold to independent textile operators. It is important to note that the separate dismembered parts of the consolidation under separate and independent managers were all conspicuously successful, whereas in combination these mills had failed. The third combination of cotton mills failed, and was then divided into parts.

#### **Significance of the Law for Corporation Executives.—**

This law of balanced return, as it is called here, is merely a general working hypothesis for the corporation official, to indicate the extent to which a given type of business may be expanded. It is not exact. It is the balance between two opposing forces, a balance between the quantity of capital and

labor on the one hand, and the quantity of product on the other hand. Economies are inevitable as the business increases in size. These economies are, specifically, different in different businesses, but in general are connected with those parts of the business which are not concerned with personal judgment or individual skill and attention to detail. The economies are incidental to the automatic phases of the business. On the other hand, as the business increases certain wastes creep in which increase with greater rapidity than do the economies. These wastes, in contrast to the economies, pertain to all phases of the business where personal skill is required. They pertain to what one might call the "humanities" of business. The critical point in the expansion of any business is reached when the wastes incident to mere size overcome the economies. Before this point is reached the economies increase more rapidly than do the wastes; beyond this point the wastes exceed the economies. To determine the point is, as suggested before, a matter of very nice business judgment. Men who otherwise command that remarkable combination of shrewdness and courage, of unemotional judgment and intuitive daring which distinguishes the truly great business executive, fail in this very matter of perceiving the point of expansion beyond which their business suffers from the practical application of the law of balanced return.

**Social Aspects.**—The social aspect, too, of the law of balanced returns has great importance. It has been contended by the socialists and those having a socialistic slant to their political philosophy that modern conditions of production inevitably tend toward large-scale units the ultimate outgrowth of which is government ownership and operation. If the law of balanced returns is true, though only in its general implications, this contention is not true. For the very heart of the principle is that in many industries large-scale production is not essential,

indeed is not even so economical as small-scale production. In those industries, clearly, economic conditions of production do not demand the large-scale unit. So that the social order cannot, in the interest of increased economy of production, demand either the adoption of large-scale units throughout industry or a state control over industry predicated on the gradual substitution of regulated monopolies instead of unregulated competition. Small-scale production with attendant unrestricted competition is, by the very nature of certain industries, destined to remain; and state operation of these industries attempting to apply to them large-scale production, would inevitably lead to increased costs.

## CHAPTER XVIII

### EXPANSION AMONG BIG AND LITTLE MANUFACTURING CONCERNS

**General Considerations Bearing on Expansion.**—It is not easy to determine whether or not a small manufacturing business should be enlarged. The principle underlying the law of balanced returns, discussed in the preceding chapter, is suggestive but it is not conclusive or applicable to all cases. The constructive power of unusual business ability on the part of executives must always remain an indeterminate and unpredictable element in any business forecast. Nevertheless, there are certain general considerations of business policy which bear directly on the question of whether or not it pays to expand a small manufacturing business into a large one. From the point of view of the science of economics it is the problem of the efficacy and wisdom of large-scale production; and from the point of view of social theory it is the "trust" problem.

**Historical Survey of Industrial Consolidations.**—The large manufacturing corporation is of very recent development in the industrial organization of society. The great combinations of manufacturing establishments—the "trusts" so called—appeared suddenly during the closing years of the nineteenth century; quickly and with little warning, they reached their climax, and then gradually shrunk to inconspicuous proportions. In 1880 there was nothing analogous to an industrial trust or consolidation in the sense that the term was used later. By 1888 several industries were dominated by large consolidations, such as the Standard Oil "trust." By

1890 the tendency had reached such proportions that public opinion, thoroughly aroused against a movement in industry which seemed to threaten the stability of democratic institutions, brought about the passage of the Sherman Anti-Trust Act. The movement toward industrial consolidations stopped abruptly with the panic of May, 1893, and remained dormant during the depression of the succeeding three years. It started in afresh with renewed vigor in 1897, when the first pulsations of returning prosperity began to quicken business enterprise. It again reached a climax about 1901, and again ceased altogether with the industrial depression of 1903. Since 1905 there have been sporadic instances of industrial consolidations but no general movement analogous in magnitude or significance to the consolidations of the closing years of the last century.

1. **The Minor Cycle.**—The occurrence of these consolidations seems to fall into two cycles. The earlier or minor cycle, so called because the consolidations were fewer in number and smaller in size, began in the years immediately following the depression of the middle eighties—a depression caused by the failure of numerous overextended railroads. The consolidations formed at this time were of the typical trust form of organization, in which a board of directors assumed ownership of the corporate shares of numerous small, previously competing concerns. The trusts stifled competition effectually, but in so doing thoroughly aroused public opinion against them. They were very small at first. It is reported that about 1882 the professor of political economy in one of the eastern universities was much concerned over a combination of thread mills in Connecticut, with a capitalization of \$1,000,000. He is said to have remarked to his classes that the formation of a manufacturing enterprise of this magnitude was an unprecedented event in the industrial world. Perhaps it was. This

was in the early eighties. Within ten years combinations had been formed with capital in excess of \$100,000,000 and within twenty years a combination of steel plants had been formed with a total capitalization in excess of \$1,000,000,000. As they grew in size and number they were seen in the garb of a social menace, and became the dominating social and political "problem" demanding a legislative solution; the Sherman Anti-Trust Act of 1890 was the response of a feverishly aroused Congress.

2. **The Major Cycle.**—The later or major cycle of industrial consolidations began in 1897. It was among the first outward signs of the returning prosperity following the stagnation consequent upon the panic of 1893. At first the consolidations were few in number, but the movement, once begun again, quickly reached far beyond anything thought of in the preceding period. Every conceivable line of manufacturing had its trust. Conservative bankers, shrewd business men, and doctrinaire economists became infected with the virus of large-scale production. People condemned the trusts one moment and bought their securities in the next. It was the harvest time of promoters. By the end of 1899 more than 130 consolidations of considerable magnitude had been organized, all for the sole purpose of suppressing competition and increasing the scale of production. During 1900 and 1901 the movement continued, but the new promotions were fewer in number, owing to the fact that most opportunities for the formation of "trusts" had already been fully exploited by the bankers and promoters. Accordingly the ground was combed over again. The trusts themselves were consolidated. A pyramid was built of pyramids. The United States Steel Corporation capitalized at over \$1,300,000,000, was built up out of half a dozen smaller "trusts," themselves, in several cases the combinations of smaller combinations. By 1902



signs were apparent that many of the trusts had not justified the predictions of their promoters. The public investors became suspicious. Stock market quotations of speculative industrial common stocks became at first unsteady and then began to fall. New promotions became infrequent and several embryonic consolidations were stifled at their birth. By 1903 a veritable panic occurred in the stocks of industrial consolidations and new promotions ceased altogether. An industrial depression ensued.

During 1905 and 1906 few consolidations were formed, and these few were of only minor importance. After the depression following the panic of 1907 there were occasional consolidations of industrial businesses, more especially in the retail merchandising and automobile industries. Yet after all is said, the evidence is clear that during the period from 1902 down to the opening of the Great War the number of industrial consolidations was insignificant compared with the period of fifteen years preceding the depression of 1903.

**Reasons for Cessation of Industrial Consolidations.**—Several highly significant reasons explain why the movement toward consolidations ended as quickly as it did.

*Unrealized Economies.* Paramount is the simple fact that as a whole the trusts had turned out ill. They failed to meet the expectations of their promoters. Competition was not suppressed and the widely heralded economies of large-scale production were not realized. And in cases of failure many evidences of fraud in the conduct of the trusts came to light.

*The Changed Attitude of the Law.* A second reason for the almost total cessation of industrial promotions was the changed attitude of the law. Although the Sherman Act was passed in 1890, it was not until early in 1895 that an important case under this act was reviewed by the United States Supreme

Court. The decision of the highest court then indicated clearly that industrial consolidations were to be considered legal. The court let them pass by a verbal subterfuge, notwithstanding the spirit of the act. But in 1899 the Supreme Court reversed itself. Consolidations were not to be legalized by a mere verbal subterfuge. The act of 1890 did apply to the combinations of manufacturing plants and could, moreover, be invoked to dismember those which had been illegally formed. But this idea did not vividly and thoroughly permeate the intelligence of the banking world until the great Northern Securities decision in 1903, when the teeth of the act of 1890 were felt. This decision was widely advertised and the country as a whole realized that the act of 1890 was not dead legal verbiage, but meant exactly what it said—namely, that consolidations of competing enterprises were illegal.

*The Shift of Investment Sentiment.* A third reason that explains the decline of industrial promotions after 1903 was the shift of investment sentiment. Bankers and investors turned from manufacturing enterprises, where competition could not be inhibited by combination, to public service enterprises, where competition was legally prohibited by means of the exclusive franchise.

**Recent Consolidations.**—But beginning in the autumn of 1915, as a direct consequence of the enormously increased demand for manufactured products, the rapidly rising prices, the loosening of restrictions on monopoly—all economic concomitants of a great war—a new movement toward industrial combinations began. These recent consolidations differ in many important respects from the consolidations of twenty or more years before. In the first place, no attempt is made to secure all the plants in a given industry—good, bad, and indifferent—in the confident hope that thereby competition can be suppressed. On the contrary the purpose is to select

relatively few plants and these are chosen on the basis of efficiency of operation. Very often the chief purpose is to secure more capital for an old-established industry, either from bankers or the public. The consolidation of separate and independent plants is a mere incident to expansion. New capital rather than the suppression of competition is held to be essential to success.

**The Presumptions of the "Trust Movement."**—The premises upon which the "trust movement" was based were simple—suppression of competition and economies of large-scale production. Owing to the fact that the Sherman Act of 1890 was directed against all consolidations, the intent of which was to suppress competition, the former motive was not publicly acknowledged. It was implicitly recognized, however, and explicitly stated in terms of the number of important competitors that were included in the consolidation and the relatively large output to be controlled by the new company.

The reasons usually emphasized to support the prophecy that the consolidated company would earn more than the previous competing companies, were based on the presumptions of the economics of large-scale production. Much argument was advanced to support the general contention that the "big company" could buy its raw materials and manufacture and distribute its products more cheaply than a small company.

The entire line of reasoning assumed that the planning and responsibility could be centralized at the head, and that all the other parts of the business organization needed only to function in set lines of routine practice; a pattern of a business could be constructed and the business would succeed, if only the pattern were followed. By substituting the automatic machine for hand labor, routine intelligence had been dispensed with in the shop and the rate of production enormously in-

creased; by substituting the automatic system for reasoning, executive intelligence could be dispensed with and the rate of production enormously increased.

**The Failure of Industrial Consolidations.**—In order to test empirically the soundness of these presumptions 35 industrial consolidations were used as the basis for comparing the earnings of what might be called a “typical” or “average” consolidation with those of the competing plants before the consolidation was effected. A direct comparison was made between: (1) the earnings of the separate competing plants prior to consolidation, (2) the anticipated earnings that would result from consolidation, and (3) the actual earnings after the consolidation had been effected. As a result of the statistical study it was found that the earnings of the separate plants before consolidation were a fifth greater than the earnings of the same plants after they had been combined. This was using the first year of the consolidation as the basis of judgment. Moreover, the earnings of this first year were only some 60 per cent of what the promoters in their overconfident prospectuses had estimated that they would be. The later earnings proved no more encouraging. In fact, these first-year earnings were about a tenth greater than the average earnings during the 10-year period following the consolidation, and distinctly greater than those of the tenth year—after the business organization had been thoroughly “settled” and the plants enlarged, rehabilitated, and technically adjusted to each other’s operation.

These were the actual results as shown by statistical analysis. In the light of the anticipated economies of production and distribution the industrial consolidation was a failure.

**Reasons for Failure.**—We have not far to seek to find certain reasons for this unexpected but nevertheless certain

failure. Foremost, perhaps, is the diffusion of responsibility. A man with ample business skill to manage a small factory was given the management of a group of plants widely separate and each operating under local conditions. He was then compelled to delegate the actual management to paid superintendents, over none of whom he had more than indirect authority. If he tried to manage the scattered plants as he had his single plant, he found that the enormous detail involved too great a burden for his mind; important matters passed unnoticed and the local superintendents degenerated into automatic parts of a machine, without initiative or power of assuming responsibility. (As the large manufacturer once expressed it—there comes a point where the man in the twentieth story of an office building cannot make up, no matter how brilliant he may be, for the waste and shiftlessness of a variety of superintendents in many mills hundreds of miles away in all directions.) If, on the other hand, he delegated a large share of the authority to his local superintendents he found that he required men of marked business ability to manage the separate plants efficiently; he required, in fact, a degree of ability which commanded so high a salary as to absorb the presumptive economies due to consolidated management.

Again lack of knowledge of individual employees is a difficulty. A successful competitor of a large consolidation declared that his success was due to the fact that he knew the parents and grandparents of the employees in his mill. He had watched them from childhood. He knew the skill and deficiencies of each and therefore the kind of work and the condition which would bring out the greatest earning power of each. Such possibilities of individualized superintendence of labor were impossible where the organization had grown so large that all personal contact between employer and employee was lost.

Lack of loyalty of officers and directors is often one outcome. In order to maintain the continuity of the separate businesses it was the custom to have the more prominent men who had disposed of their plants to the consolidation serve as members of the board of directors, or as managing officers of the corporation. But the center of their loyalty was changed. They were no longer operating their own plants. Personal motives easily supplanted any feelings of responsibility they might have toward the great body of stockholders. As directors they were tempted to burden the consolidation with useless plants at personal profit, or to make advantageous contracts with other companies in which they were interested, or give employment to relatives at high salaries. They were tempted to speculate in materials in such wise that the burden of loss fell on the corporation, or to purchases and sales of the corporations' securities, based on knowledge exclusively their own. If the body of stockholders found fault with such codes of business ethics the directors could resign their positions and sell their securities. They could even enter into competition with the consolidation and grow strong through a knowledge of the trade enhanced by their previous connections.

Lack of attention to the laborious parts of the business by the higher officials is almost certain. The directors considered their positions too important and their time too valuable to spend on matters of detail. Previously, as owners of competitive plants, they were at their business offices each day from early in the morning to late in the afternoon; as "vice-presidents" they were more often at the office of the corporation from 10 until 3 o'clock, and not at all on Saturdays. They no longer felt obliged to sacrifice social pleasures for business motives. They were no longer concerned with petty economies of manufacture, insignificant alone, but large in aggregate. Even in the utilization of by-products, where one of the

economies of large-scale production was supposed to lie, the executive officers would frequently take the position that the possible advantage was too insignificant to be worth their attention and trouble. (There are two temptations which confront every director in a large corporation. The success with which a man, suddenly risen to influence, resists the feeling that he is too important to devote himself to the current detail of management and the feeling that he is in a position to profit through stock market manipulation measures his future success in the position of responsibility. No human mind is great enough to manage a large business with consummate skill and follow in detail the market quotations of its securities. It is a modern instance of serving two masters.)

Customers do not always like the machinelike methods. There was, and still is, a group of men who are so blinded by an external appearance of efficiency that they have come to think that the more automatic and impersonal a business becomes the greater will be its productive power. Fortunately this theory is no longer widely held. But at the time the industrial consolidations were created it was popular. As a consequence the central management undertook to substitute a more scientific and carefully articulated method of producing and selling goods for the slipshod methods of the small establishments. In cases of a standardized product the application of more scientific methods to production were undoubtedly wise, but in all branches of the selling organization they were an absolute failure. Few things count more in salesmanship than the personal magnetism of an able salesman basing his appeal on long-established trade connections. The directors of the consolidation sought in the interest of organization and economy to replace high-salaried salesmen by low-paid order clerks. Many of these salesmen had been the proprietors of the old businesses, men who held their customers by family association—the customers of their grandfathers and

greatgrandfathers, perhaps. "Among the oldest houses doing business with us" was a bond which the force of circumstances broke with difficulty. Instead of profiting through this bond the new order of scientific salesmanship interposed the deadening influence of organization between buyer and seller. Customers found that they were no longer dealing with the son of their old friend but with some cog in the machine designated as ABC. Before, they had arranged the terms of their contracts in a dingy office, replete with the memories of half a century; now their contracts were forwarded to them from the central office or delivered to them by the manager's secretary. As a result they often turned elsewhere.

Mere size in itself often proves a handicap in competition with the smaller and more mobile competitors, especially in making the large company less able to withstand depressions in the trade. Moreover, instead of getting raw materials at a lower cost the large company found it more hazardous to contract for the large quantities required for sustained production, partly because the very publicity of the company's demands tended to raise the prices it was forced to pay. This was conspicuously true if the consolidated company used a raw staple product, such as cotton, wool, corn, or pig iron. The large orders had to be placed openly, often with one of two or three large producers who alone were able to guarantee deliveries. If the raw materials, like cotton or corn, were quoted openly on one of the exchanges, the consolidated company's buyers were forced to supply the needs at the open contract prices. A small competitor with a relatively small total demand could "shop around" the market, purchasing secretly odd lots at a marked concession from the published prices. In many instances, therefore, "quantity purchases" proved a disadvantage rather than an advantage. During the early years of the starch and glucose consolidation a small competitor made himself con-



spicuously troublesome by closing down his factory during periods of small demand—when heavy overhead charges made operation unprofitable—and starting it up when the demand returned, using odd lots of ungraded corn. In this manner he was able to produce glucose much cheaper than it could be made by the consolidation. By bidding under the prices asked by the consolidation he could sell just enough glucose to use up the amount of cheap odd-lot corn procurable at any one time. But small as was his possible production in comparison with that of the consolidated company, he made it impossible for the large company to maintain its prices uniformly in all markets.

Again, the large consolidations, especially in the first years of their existence, were very reluctant to substitute improved machinery and equipment for that acquired with the original plants and, instead of encouraging improvements and stimulating experimental work, clung to their great masses of worn and obsolete machinery. Under these circumstances the newer competitor with a thoroughly improved plant obtained lower costs of production.

The different ways in which the consolidated company was defeated in securing marked economies of large-scale production, and handicapped in its competitive battle with smaller businesses might be further extended. But it would add little of general significance. The important conclusion to be obtained from a survey of the great consolidation movement at the close of the nineteenth century is that competition cannot be inhibited by combination. There is nothing in large-scale production, taken alone, that is necessarily economical.

**Economic Laws and Unbridled Expansion.**—Nor are these conclusions essentially different if we consider the results of unbridled expansion where that expansion represents merely internal growth without such absorption of outside elements

as would permit one to use the term "consolidation." Examples of businesses having attained a national scope through mere growth are not as common as businesses that have become great by consolidation. But having become great they are subject to the same economic laws. During their period of growth they represent usually the work of a single man. In his youth and prime this man is a veritable business genius. He overcomes difficulties; he stifles competition. His company gradually but steadily forges to the head. It may even become the largest single factor in the industry. But once the man has passed his prime the same failure to observe the ineffectiveness of mere size creeps in as in the case of a direct consolidation. The business becomes too big for a single man, now passing beyond middle life, or for the group of subordinates to whom he has to entrust executive administration. In order to strengthen itself in one or another direction the business has probably branched out into allied or even different lines of enterprise. Some of these prove profitable, others do not. Large amounts of liquid capital are absorbed in an endeavor to maintain and increase the volume of sales. And when the whole situation is analyzed it will be found that the business has actually fallen back, when measured in return on invested capital, during the time when it has apparently gone forward, if measured in terms of volume of sales. If wastes and mistakes of management are too pronounced, especially if they develop rapidly at a time of financial panic, the business fails.

The two largest mercantile failures during the last twenty years meet these conditions exactly. The Westinghouse Electric and Manufacturing Company was built up from an insignificant beginning to one of the largest factors in the electric industry in the world, through the business genius of George Westinghouse. But the business expanded too rapidly and became unwieldy; it exhausted its working capital and failed in the panic of 1907.

Horace B. Claflin started a wholesale dry goods business in 1843 in New York. By the end of the Civil War the sales of H. B. Claflin and Company had reached \$64,000,000. The business steadily increased until the death of H. B. Claflin in 1885. The house was at the time the largest wholesale jobbing house in the country—possibly in the world. The net annual earnings amounted to approximately \$700,000. Meanwhile smaller dry goods jobbing houses sprang up in the West and this movement developed rapidly after the depression of 1884. The specialty jobber also came into prominence. These tendencies were recognized by H. B. Claflin, who at the time of his death was entering the importing and manufacturing fields. The son, John Claflin, sought to follow his father's aggressive policies, but lacked the judgment. Seeing the jobbing business slipping away to smaller competitors, he sought to preserve his position and stabilize his market by establishing a chain of department stores all over the country—upwards of 40 in all. Over these extensions John Claflin exercised the most indirect methods of control. The sales policies of the retail stores were inefficient and antiquated. Their accounting systems permitted the local managers to deceive the central office regarding their true value. There was no standardization of purchases and no attempt to pool purchases so as to obtain quantity discounts. Many of these stores were purchased from the proceeds of the discount of ordinary commercial notes bearing the Claflin name, so that what purported to be commercial notes secured by quick assets were really only financial notes backed by the rapidly declining good-will of scattered and poorly managed department stores. Finally in June, 1914, the banks withdrew further extensions of credit and the structure collapsed. Ordinarily, however, the results are not so dramatic. The big business merely continues to exist, yielding a lower return to its proprietors, proportionately to the capital invested and the volume of business, than

is the case with its smaller competitors in the same industry.

**Successful Types of Consolidation—1. Automatic and Integrated Industries.**—It is not true, however, that all consolidations and expansions are unsuccessful. As suggested in the discussion of the law of balanced returns, certain kinds of enterprise, such as heavy metal industries, lend themselves to large-scale production.

A type of enterprise in which consolidation has been of obvious benefit is in those industries in which it is possible to reach back to the primal raw material and forward to the ultimate consumer. This is known as "integration." A business concern, originally controlling only an intermediate process of manufacture, acquires by consolidation another concern which produces its chief raw material and still another which distributes to retailers or even to consumers its finished products. A furniture factory, for illustration, acquires a lumber company on the one hand and a furniture jobbing business or even a chain of retail stores on the other hand. In this way it controls the entire course of the furniture production and distribution, from the forest to the home. A shoe factory reaches back and acquires a series of tanneries, and forward, to acquire a chain of retail shoe stores. An automobile tire company acquires a fabric mill and cotton acreage; a rubber concern acquires plantations in Ceylon. These combinations are certainly not always successful, because the close integration removes the spur of competitive buying and selling at the different stages of manufacture and distribution, but many of them have turned out well, especially if no great administrative ability is required in conducting the subordinate or "tacked-on" businesses. Besides effecting such economies as the closer union makes possible, the producer of the material at any one stage can regulate its production in accordance with the known demands of the next higher

stage. The whole process of production and distribution is therefore less susceptible to fluctuation than when each unit is producing for a competitive and uncontrollable market. The expenses and the wastes, the lost motion and the friction, of selling the intermediate products is entirely done away with. There is but one real sale, that to the ultimate consumer at the end of the whole chain.

Integration has been one of the chief reasons for the success of the United States Steel Corporation. It acquired, with the old Illinois Steel Company, extensive iron mines west of Lake Superior; it acquired, with the Carnegie Steel Company, a railroad from Lake Erie to Pittsburgh. Certain of its constituents, like the American Steel and Wire Company, the National Tube Company, and the American Bridge Company, manufactured and sold fabricated steel products to the ultimate consumer. The Steel Corporation acquired coking coal and limestone deposits, coke ovens, and pig iron furnaces. It organized numerous intermediate links to the chain so that soon after its organization the corporation could claim, in truth, that it carried on every branch of the steel business from mining the ore to the sale of the fabricated products to their ultimate consumers. One conspicuous reason for the success of the present Corn Products Refining Company under the Bedford management has been the fact that it has directed its chief efforts to produce end products sold directly to the ultimate consumers rather than intermediate products sold to other manufacturers. It even acquired control of companies which produced the end products when this course seemed preferable to developing a market of its own. The number of instances in which this kind of vertical consolidation has taken place within recent years is very large.

**2. Chain Stores.**—The systems of chain stores are combinations of another kind which are usually successful. The

capital employed here is not invested in machinery but used to give great buying power and the chance of taking advantage of all cash discounts. The labor element is often reduced to the simplest kind of service.

Like other types of large businesses likely to prove successful, a chain of retail distributing stores requires for its management a special and unusually able form of executive ability. But once this peculiar executive ability is acquired the length of the chain may be considerably increased without lowering the general efficiency of the entire management. No new problems arise in the management of a consolidation of twenty stores of the same general character, than existed in the management of five or ten. No essentially new executive qualities are required. Consolidation can therefore be effected, provided that the two chains of stores are doing the same kind of business, and provided also that the ability and experience of management required in the new enterprise differ in scope, but not in kind from what has been required previously.

The type of retail chain store that has proved most successful in the past and that will probably be found most successful in the future is confined to those fields of merchandising where individual personal services of the store-keeper are least important, such as cafeteria restaurants, grocery stores, drug stores, cheap dry goods and notions stores. In a purchase from a store of this kind the salesman is merely a cashier. As the price paid is small, the transaction is completed in a moment's time; no credit is extended and the customer carries away his purchase.

**3. Foreign Trade Companies.**—Another group of industrial combinations, having to do with foreign trade, have proved successful and are likely to prove more so as international competition after the Great War becomes increasingly intense. So far as the United States is concerned, these com-

binations are of comparatively recent origin. They are of two distinct classes. The one class represents a combination of shipping companies, each one of which had done a more or less localized foreign trading business. The other class represents a combination of American producing companies organized for the specific purpose of exporting, in close cooperation with each other, their surplus production to foreign parts. It is quite possible, as the business of our foreign trade becomes stabilized, that the two kinds of export business will coalesce, but this has not occurred as yet.

*Combinations of Exporters.* The first class is spoken of as "export companies," or "exporting corporations." They produce no merchandise themselves, but act merely as foreign merchants on a large scale. Before the Great War much of our foreign commerce was handled by agencies or small exporting merchants who did a restricted business confined to relatively few localities, perhaps to a single one. The merchants and manufacturers of this country were, before the Great War, so intensely concerned with exploiting our own natural resources and developing our own markets that they entirely neglected export trade, except for an occasional spasmodic onslaught when there happened to be a glut in our own domestic markets. But with the closing of neutral markets to the European belligerents during the Great War, an unprecedented and extraordinary opportunity to enter foreign trade was offered to American exporting houses. In response to the pressure suddenly placed upon them these exporting houses either expanded their businesses with the aid of new capital or else combined among themselves into large, widely extended companies. These may, after they have thoroughly learned the foreign business, prove successful. They command capital and widely extended banking connections. As manufacturers' agents they are able to reach many more markets than is possible for a single exporter. Several of these combinations have

embraced smaller organizations with widely separated agencies—as a combination between one exporting concern doing business in Central America and parts of the Caribbean Sea and another doing business on the east coast of South America. As merchants doing exporting for their own account, they are able to develop a much more accurate and comprehensive understanding of foreign demands than is possible for small exporters with very limited markets. In this manner they are able to exercise far more intelligence in purchases for their foreign accounts than could the small exporter. And in addition to the wider facilities for merchandising American products, these combinations are able to control steamship companies, wharves, storage warehouses, besides having command of considerable banking and credit facilities.

*Consolidations of Manufacturers.* The other class of industrial export companies is almost too recent in origin to be included in this survey, except by way of prophecy. It includes the consolidations of manufacturers, legalized by the so-called Webb bill. Ever since prosecutions under the Sherman Act of 1890 began to inhibit the formation of new consolidations and cause terror to those already formed, business men who believe in large-scale production have argued for the need of consolidations on the ground of foreign trade. The contention that large-scale units of production in this country are required in order to meet successfully the large-scale units of other countries looms large in their apology for the trusts. And it has a sound basis in fact and theory. The small business has not at its command the capital, the organization, the flexibility of production, even the intellectual grasp of commercial affairs, to enable it to enter successfully the field of foreign trade. It is urged, therefore, that public policy, which requires that foreign commerce shall thrive under the best auspices, should countenance the large industrial consolidations. Some even advocated that the Sherman Act should be repealed or at best



modified, so as to legalize industrial consolidations engaged in foreign trade. By no other means, they believed, could American export trade be developed. The Webb bill was the compromise between those who would encourage consolidations in order to promote foreign trade and those who would prohibit them in order to prevent monopoly in domestic trade.

The Webb Act provides that American export business be liberated from the restrictions of the Sherman Act of 1890. It enables manufacturers to combine for the purpose of carrying on foreign trade, even though such combinations are specifically prohibited by the Sherman Act. Under the Webb bill domestic competitors may collectively form an export corporation which markets a certain proportion of the output of all the competitors, each one of which assigns to the export company a stated percentage of its production. The act presumes that manufacturers can be associated in their foreign business and yet remain competitors in their domestic business. It requires a kind of trade duplicity. Part of this duplicity is a pure fiction and part is based on sound economic principles. In so far as the Webb bill presumes that foreign business can be carried on without affecting domestic business, it is an anomaly; but so far as it presumes that foreign business requires the continued support of a large producing organization, it is absolutely sound. In this it is merely copying what European nations have already done in building up their foreign commerce. And without this support our rapidly expanding foreign trade would be stifled by the very anxiety of the small producers to preserve their existence at least under the necessarily competitive conditions of the domestic market. In other words, some kind of organized and united effort must take place in order to enable American manufacturers to export their merchandise in competition with the organized and united efforts of European exporting organizations. But whether the problem is to be solved by combinations among export

houses themselves, which carry many lines into a few highly developed markets, or by combinations of manufacturers carrying a single product into many markets, only the future developments of commerce can tell.

## CHAPTER XIX

### RAILROAD EXPANSION

**Present Conditions.**—A study of the expansion and consolidation of American railways is now a matter of little more than historical importance. While there are likely to be many changes in the corporate and financial organization of the railways, still the changes will inevitably follow lines different from those during the long period between the commencement of railway consolidation in the early forties and the assumption of federal control on January 1, 1918. The passing of the Railroad Act of 1920, by which the private operation of the carriers was resumed, has given the government a direct and explicit supervision over changes in operating and financial control. The welfare of each road is now completely conditioned and circumscribed by theories of general public expediency. The period of promotion and personal direction, during which the railway net was built, ended at the opening of the Great War; and with it ended, too, the expansion and consolidation of railway properties in the sense that these terms could be made to apply to the railroad history of previous years.

**Forms and Devices of Consolidation.**—Railway consolidation in the broad but restricted manner in which the term is used here implies the direct merger of financial and operating control. It is brought about by either lease or direct ownership, or both. And direct ownership may be either through the ownership of stock or the complete merger of real and personal property with the total extinction of the separate existence of one or more corporations. These are

types. A great many cases exist in which consolidations are effected by both lease and merger. And the particular forms of these fundamental types are as various as the ingenuity of man can invent.

The application of these forms and devices by which railroad consolidation and expansion has occurred will become clear from a summary statement of railroad consolidation in the United States. This is a subject of great significance to American corporation finance, because many of the expedients employed in the consolidation of other industrial units arose in response to a social demand which required operating—and incidentally financial—unity among railroads.

**Periods of Consolidation.**—The history of railroad consolidation in the United States may be roughly divided into three periods of unequal length, according to the extent and the character of the prominent railway consolidations of the period. Down to the early fifties railroads were built as small, separate, distinctly local enterprises. Prior to that time a railway journey was made up of various small journeys over connecting lines. For example, in 1852, before the longitudinal consolidation of railroads had begun, a passenger traveling along the great north-south artery of travel would use 18 different roads between Augusta, Maine, on the north, and Montgomery, Georgia, on the south. Railroad consolidation, in the broad sense in which the term is used in the present chapter, did not occur until 1853, when the New York Central Railroad was formed. From then until the depression following the panic of 1873, small local railroads all over the East and Middle West were jointed together longitudinally to form through lines between large cities. A second period of railway consolidation began in the later seventies when these through lines were connected with each other and with lateral branches, to form railway systems. Just before and following

the many railway reorganizations of the middle nineties, a third period of consolidation set in during which the widely articulated systems created during the previous period were still further unified into great, loosely organized railroad combinations. They became, as it were, systems of systems.

1. **End-to-End Consolidations (1853-1873).**—During the first period of consolidation, roughly from 1853 down to 1873, small, local end-to-end roads were brought under a single operating and financial organization. The purpose invariably was to establish better connection between two large cities rather than to develop railway systems. The first, and for a time the most important, of these end-to-end consolidations was that of the five connecting roads constituting a through line from Albany to Buffalo. These five roads, with various lateral and parallel branches, were united in the summer of 1853 to form the New York Central Railroad. Three years later this end-to-end consolidation showed itself in the West in the formation of the Chicago, Burlington and Quincy by the union of the Chicago and Aurora and the Central Military Track Railroad. In New England end-to-end consolidation by lease appeared when in 1861 the old Concord Railroad and the Manchester and Lawrence agreed to the joint operation of their roads together with the lease by the former of the Portsmouth and Concord Railroad and the Manchester and North Weare Railroad. By 1873 there were no less than 69 of such end-to-end consolidations of more than 200 miles in length. The average length of all these 69 consolidations was only 389 miles and the longest, the Erie, was only 959 miles. In some cases they represented mere end-to-end consolidations without the construction of new mileage, except incidentally. But in the majority of cases the consolidation represented the bringing into a single line completed small railroads and others partially completed but embarrassed

for want of money to continue construction. The new company in such cases secured its charter for the express purpose of completing the unfinished sections of road and building other sections beyond. The methods and purposes were almost as varied as the consolidations. It was a question in every case of local expediency. Yet behind this variety it is important to observe that the chief characteristic of consolidations throughout this period down to the panic of 1873 was the obvious purpose of establishing longitudinal through lines. Branch lines were absorbed and even built but these were incidental to the main purpose of establishing through lines of communication. Railroad strategy and competition for territory were unimportant factors in shaping the course of consolidation. Questions of the gauge of the connecting lines played a part in shaping some consolidations; in others matters of local pride played no small part. But the paramount question throughout the period was the simple one of getting through continuous service between the large cities of the Union.

**2. Formation of Railroad Systems (1873-1893).—**The second period, following the panic of 1873, centered about the formation of railway systems. It is perhaps impossible to draw a distinct line between the two; and the distinction between a through line and a railway system is arbitrary indeed. Nor did the change of emphasis occur simultaneously in all parts of the country, so that the historical divisions we are insisting on here are admittedly crude and arbitrary. But it is an historical fact that prior to the panic of 1873 little effort was expended in developing unified, self-dependent, well-rounded railway systems, whereas in the years following the awakening of business in the late seventies this was the center of interest among railway operators. Their vision had become enlarged.

**Improved Methods of Operating.**—Aside from the natural desire of railroad-owners and officials to expand their properties, several facts connected with the physical operation of railroads tended to promote the amalgamation of railways into systems. Perhaps the most prominent of these was the acceptance of a uniform gauge for all the railroads of the country. In 1865 there was no uniformity of gauge and great inconvenience and expense was involved in the transshipment of freight at connecting points between railroads having different gauges. By 1875 most of the roads of the Northeast and West had adopted the standard gauge and the important roads having a wider gauge had laid a third or fourth rail to accommodate the interchange of rolling stock. By 1886 the roads of the entire country had adopted the standard gauge and a loaded freight car could move freely over the whole national system of railroads. In addition to the establishment of a uniform gauge throughout the country there had gradually developed a great number of technical improvements in the rolling stock, the road bed, and the signaling systems. Radical improvements along these lines were most conspicuous in the decade following the Civil War. The result in every case was to improve the quickness, certainty, ease, and cheapness of movement of trains. And in response to the greater rapidity and safety of transportation the public came to demand an improved service. One of the chief requisites of this improved service was fast through trains, both passenger and freight. This demanded extensive organization which easily tended to promote the development of the railroad system.

**Competition.**—Coincident with the growth of improved methods of operation went the growth of competition. As small railroads were joined longitudinally so as to form through routes between large cities, competition over these

routes began to develop. Soon after a through route from the Great Lakes to New York had been established by way of the New York Central to Albany and the Hudson River road to the Harlem, the Erie and its connections also began to offer a corresponding service. No sooner had one series of roads established a connection between two important points than some other routes began to compete with it for the meager traffic available. Competition loomed large as a factor in railroad operation and railroad management. Inevitably, whatever the field of industry, consolidation is sought as a remedy for competition. And this unquestionably was one of the underlying causes that led to the development of railway systems in the period after the panic of 1873.

**The Impulse to Expand.**—But more important by far than any advances in the technical or administrative operation of the railroads and the rivalry engendered by competition, was the growing strength among prominent business executives of the impulse to expand. The crude beginnings of railway systems were to be found before 1873. But, like the early development of the Pennsylvania system, they were the result of the force of pressure from without rather than from within. After the depression following the panic of 1873 the whole motive changed. A new force, psychological rather than technical or economic in character, had injected its virus into the railroad world. Just as some fifteen or twenty years later the development of internal commerce made it appear possible to combine the operation of geographically separated factories under a single management, so the creative imagination of the railroad operators grasped at the possibility of combining through routes and branch lines into closely knit railway systems. The natural instinct of the business executive is to play for bigger things. This is his mode of exercising the primal Anglo-Saxon craving for conquest. This



simple explanation is all that is necessary to explain why, during the ten or fifteen years of business expansion between the panics of 1873 and 1893, a large number of the great railway systems of the country were created out of disjointed parts.

**Plan of Physical Development.**—The methods employed in building up a railroad system varied in individual cases. But a general plan of physical development has been sufficiently common among important railway systems to be considered typical. In brief, it has consisted of the extension, longitudinally and laterally, of a single relatively short trunk line. This extension was usually effected both by consolidation with previously existent lines and by the construction of new lines and new connecting links. A single line, oftentimes only a few miles in length and of relative insignificance, became dominated by men who were moved by the impulse for expansion. The line was then extended longitudinally and laterally. It seemed to move forward, like a primitive amoeba, by the extension of lateral processes in directions. It acquired a significance in the railway world quite disproportionate to its size. It became, in effect, the nucleus of a railway system. The development of the Atchison, Topeka and Santa Fé rail system is an illustration of the principles at play, though no more typical than is the development of other large railway systems. Finished as a completed road of 471 miles in 1873, it grew rapidly until in 1892—less than twenty years—it became a railway system of over 9,000 miles in length. And the growth of railway systems similar to the growth of the Atchison, but not quite so extreme, was taking place all over the United States. In 1873 there were no railroads in the country more than 1,200 miles in length, including the branch lines, and only three in excess of 900 miles. In 1893 there were 35 systems possessing a mileage in excess of 1,000 miles and 5 separate systems that exceeded 5,000 miles.

3. **Formation of Systems of Systems (1893-1910).**—But the development of railway systems was not enough. In the late eighties, about the time the formation of industrial trusts began to attract seriously the attention of business men and political and social observers, railway operators began to enlarge their spheres of influence from railway systems to systems of systems. Thus began the third and last period of railway consolidation. In the earlier periods combination was usually dominated by traffic expediency. It was the hope of holding and increasing traffic that led to the end-to-end unions of the early period and to the welding of disconnected lines into systems in the second period. But in this third period of consolidation the ruling motive was not so much the increasing of traffic, for that could be obtained by intensive development of the already existent systems, but the increasing of administrative and financial control over whole sections of territory. Instead of consistency and inward coherence a myotic, headstrong, and unreflective competition for power dominated railroad strategy. As a result, railroad systems were joined together, often by mere accident, provided the power of the railroad operators was increased and the scope of their activities extended.

The process continued, uninterruptedly until the Northern Securities decision of the Supreme Court forced a reversion, or perhaps slowing down of the consolidation mania. Then, following the panic of 1907 and the railroad legislation of 1910, the railroad operators began to question the expediency of burdening the already extended railroad systems by still further extensions. Railroad consolidations ceased altogether. And in the reorganizations occurring between 1913 and 1918 there was a reversion of the process and large parts of the bankrupt railroads were lopped off. The problems of efficient railroad management were serious enough with a small system; they became well-nigh insurmountable with a great disjointed

and inarticulate system when the general structure gave no especial ground for expecting increased economy of management. Railroad consolidation was discredited by actual experience quite as much as by the Supreme Court.

**Methods of Consolidation—1. Consolidation by Lease.—**

During this long period of railroad consolidation two general methods were pursued, (1) consolidation by lease, and (2) consolidation by merger. Consolidation by means of the lease of one railroad property by another secures the benefits of united operation without the financial cost involved in the outright purchase of a railroad property or even of the controlling shares in a railroad property. This is the chief advantage of the lease. The feature of importance in all lease agreements is the compensation. This is either fixed or contingent. In the fixed-rental leases one railroad corporation agrees to pay to another railroad corporation or to its security-holders a stipulated annual amount; in the contingent-rental leases the annual payments depend on some variable element, such as earnings or the volume of interchanged traffic.

**Contingent Rentals.**—It is distinctly an open question as to what form of contingent rental is fairest to all concerned. A rental, which is ultimately a contract between the security-holders of the two corporations, must obviously involve advantages to both. Usually the most important advantage is in the exchange of traffic. This is registered in the volume of gross business, so that a proportion of gross earnings would seem at first thought to be the fairest basis for determining the rental. And this would be true were the earnings of the subsidiary not affected by the joint traffic agreement between the two roads. But when the main line is able, through the control of a majority of the stock of the subsidiary, to impose on the latter an agreement on interchanged traffic which returns

to the subsidiary an unconscionably small percentage of the joint revenue, the earnings remaining to the subsidiary's own security-holders will be meager and unfairly small. If all the securities of a leased line are owned by a parent company, or at the other extreme if the larger company has little ownership in the subsidiary or cannot exercise any control over the traffic interchange contract, then there can be complete freedom of contract between the two boards of directors and no unfairness of rental can be alleged. But in cases like those enumerated above, when there is a conflict of interest between a controlling majority and a helpless minority of security-holders, a question not only of the expediency but also the fairness of leased line rentals is inevitably raised. And this difficulty is increased when the rental is based on net rather than gross earnings. For in such cases the controlling parent company may not only determine the division of the revenue from the interchange of traffic, but it may also control the expenditures for operating expenses of the subsidiary, so as to fix arbitrarily its net earnings and its rental.

These difficulties proved to be serious obstacles in the building of railway systems. The contingent rental must be fair, and not open to the accusation of secret manipulations. Yet at the same time it should give the leasing road the benefits of its abler and more highly organized operation. The latter would not assume the responsibility of the lease without the benefits which would be likely to increase through the years. For these reasons fixed rentals have been preferred over any form of contingent rental and their use, as compared with contingent rentals in any form, has increased during each succeeding period of railroad consolidation. At the time of government control, they were the important form of lease.

**Fixed Rentals.**—The differences in rental payments are not as important as would appear at first sight. In most cases

there was outstanding at the time the lease was originally written many years ago, considerable amounts of stocks and of bonds in the hands of the public. In the majority—but by no means all—of the leases of this character, the parent road has gradually acquired the stocks and often the bonds of the leased road, so that the payment of the fixed rental is merely a bookkeeping adjustment involving the transfer of credits from one account to another. When considering the lease, indeed, merely as a device for consolidating railway lines, the fixed rentals are significant only in the smaller number of cases in which the leased-line securities are still in the hands of the public. It is important, however, to note that the number of such cases, especially among New England lines, is still sufficiently numerous to present an important and often embarrassing problem.

The device of fixed rentals with large amounts of the leased line's stock remaining in the hands of the public has great advantages to the parent road during the time that the prosperity of the railroads is ascending. It then shuts out the old leased line's security-holders from the increased profits due to greater prosperity and gives to the controlling management the full fruits of increased economy and efficiency of operation. But just the reverse is true when the lease is consummated before or during a period of declining prosperity. In that case the security-holders of the leased road may demand their rental whether or not it has been earned. The charge has become fixed and inflexible and its default would precipitate failure of the whole consolidated structure. And it is unquestionably true that with the further development of railway consolidation under the encouragement of the Cummins Act of 1920 rather than the discouraging prohibitions of the Sherman Act of 1890, the lease will dwindle to insignificance as a means of consolidation. In forced reorganizations, like that of the Boston and Maine, it has so

far as possible been superseded by direct consolidation. And this change is destined to occur in the future in all cases where the fiction of a lease is not required as a legal subterfuge. Nevertheless it has a great historical significance in the development of American railway consolidation.

**2. Consolidation by Merger.**—A lease, whatsoever the form of compensation, is a relatively weak and uncertain means of effecting consolidation. Its very economy, even, is not always an advantage, for what is cheaply got is often easily lost. If the union is very important to the consolidated system, a railroad management will not ordinarily allow it to rest on a mere lease. The stockholders of the leased line might find some excuse for canceling the lease directly; or they could allow their road to be thrown into the hands of a court receiver who would then cancel the lease as an undesirable contract inherited from the past management. The leasing road would be helpless in either event to prevent the action or even to collect damages from the receiver of the reorganized road. In order to prevent any such misfortune, leasing railroads have always sought to reinforce the lease by the purchase of at least a portion of the stock of the leased road. This introduces at once the second great type of consolidation expedients, namely, that of stock control.

Ever since the consolidation of railroads commenced it has been the policy of railroad managers to purchase at least a minority stock interest in the railroads the operation of which was important for the main system. This was true even when the subordinate road was controlled by lease. And if the subordinate road is of essential importance, it is probable that those in control of the consolidated system will insist on obtaining sufficient stock to secure a majority stock control in addition to the lease.

The advantage of consolidation through ownership of a

portion of the stock of a railroad rather than complete ownership, lies in the greater economy. Complete control is secured, moreover, if a majority of the shares are acquired, so that the danger of the repudiation of the lease is not present as when the road is held by a contract of lease alone; yet the investment is small compared with that required for the outright purchase of the road. Especially is this true if the subsidiary road has a considerable bond issue which would have to be paid off before absolute title could be acquired. It is this security of control, combined with the small money outlay, that has made this method of consolidation the usual one in the history of American railways.

All manners of combinations of the lease and the stock control are to be found in the annals of American railway consolidation. And very frequently the lease is employed as a reinforcement to stock control, just as stock control is used to reinforce a lease. But in theory the two methods are distinct. The stock control involves the outright ownership of sufficient of the voting stock to give the main road absolute executive management of the subsidiary. It selects the board of directors. It determines its policy with the same autocracy as it does its own lines. The control is therefore permanent and absolute, so that the directors of the consolidated system may look upon the subsidiary road in their plans about the future as if it were, to all intents, their own absolute property. For this reason control through stock ownership permits greater scope and comprehensiveness in determining policies than control merely through a lease.

**Methods of Acquiring Stock Control—1. Purchase of Stock.**—In acquiring stock control three important methods have been followed. The simplest is, of course, the outright purchase of a railroad's shares, either at private sale or on one of the exchanges. Ordinarily a large road, wishing to acquire

stock control of a smaller road, ascertains by inquiry the names of the road's largest stockholders. Its representatives then make overtures looking toward the outright purchase of a sufficient number of shares to give it control. When the stock of a small line is widely held, or when two railroads are seeking to acquire its control, it may be necessary to go to extreme lengths in picking up the stock. Instances have been known of the agents for the purchasing railroad going from house to house among the stockholders in order quickly to secure a majority of the shares. Having arranged for the purchase of a large or majority interest from a few of the most important stockholders, the road then announces publicly that it will purchase all the stock offered to it at a specific price, reserving to itself the right to withdraw the offer at any time. The road is thus enabled to retire from the market as soon as it has acquired the requisite control, or it may continue to purchase all the shares offered in the hope of obtaining not only a majority of the shares but also the entire capital stock. In the latter case it becomes relieved, forever, from the fear of any legal interference or obstructions arising from a small but recalcitrant minority.

2. **Exchange of Stock.**—Another method of obtaining stock control at the time of railway consolidation is through an exchange of stock. This method was very common in the period during which the large railway systems were being built up—down to the panic of 1893. In fact some very important railway systems came into existence originally through an extensive exchange of the stocks of numerous small lines for the stock of a new company formed for the very purpose. This was the origin of the New York Central. This method of consolidating by an exchange of stocks has the advantage over outright purchase in requiring no direct money expenditure, so that no financial expedients have to be adopted in order to obtain



money. On the other hand, it was usually necessary for the road that acquired the stock of another through exchange of its own shares to make a particularly favorable offer to the shareholders of the other road in order to tempt them to surrender control of their property. This is expensive, when viewed as a dilution in the value of the purchasing road's own stock. On the other hand, very often the advantage of securing a stock of greater marketability is quite as effective in leading the shareholders of a small local road to exchange their stock for that of a large road at an apparent profit; in some cases the prosperity of the small road is so closely connected with that of the large road that the shareholders feel that their investment is best protected when made an integral part of the consolidated system.

3. **Use of Collateral Trust Bonds.**—There have been many instances during the thirty years from 1880 to 1910 in which a third method has been adopted, the use of the collateral trust bond by one railroad system to acquire stock control or even entire stock ownership of another railroad. Three notable examples require more than mere passing comment because of the extent and importance of the railway mileage involved. In 1898 the New York Central and Hudson River Railroad found it necessary—as the Pennsylvania Railroad had found it necessary thirty years before—to acquire absolute control and ownership of its Chicago extension. Accordingly, the directors of the New York Central and Hudson River Railroad offered to give to the stockholders of the Lake Shore and Michigan Southern Railroad a collateral trust bond, \$1,000 in denomination and bearing  $3\frac{1}{2}$  per cent interest, in exchange for two shares of stock. The stock was deposited as collateral for the bonds. The Lake Shore stock had been paying 6 per cent dividends since 1888 and large sums had been invested in the property out of earnings. The shareholders had an

apparent increase of income. At the same time they obtained in addition a direct obligation of the New York Central system that ranked ahead of the large investment of the Central's stockholders, and were well protected against the further issue of mortgage bonds.

In 1902, when the movement in the direction of the consolidation of great railway systems reached its greatest scope, two large issues of collateral trust bonds were used to acquire control of the stock of two great railroad systems—the Louisville and Nashville, and the Chicago, Burlington and Quincy. In the former case the Atlantic Coast Line acquired the majority of the stock of the Louisville and Nashville Railroad as the outcome of a speculative raid. There was apparently no preconceived plan on the part of the Atlantic Coast Line to secure control of the Louisville and Nashville. Yet as a result of the efforts of a certain Wall Street gambler a majority of its shares had been brought together and were offered for sale. To place them under the control of the Atlantic Coast Line seemed on the whole the best solution of the difficulty, and the collateral trust bonds of the Atlantic Coast Line were issued to secure the necessary funds.

The acquisition of the stock of the Chicago, Burlington and Quincy Railroad by the roads controlled by the late James J. Hill was, on the other hand, the result of a preconceived plan. Neither the Great Northern nor Northern Pacific Railroad had an eastern terminal in Chicago. This was a very serious handicap in the competition for transcontinental traffic. Especially was this true as the Union Pacific had a closely affiliated Chicago connection in the Chicago and Northwestern Railroad and the Atchison reached Chicago over its own tracks. Accordingly, the directors of the two northern railroads offered to give to the stockholders of the Chicago, Burlington and Quincy Railroad—many of them New England investors—\$1,000 par value in the 4 per cent

joint bonds of the Great Northern and Northern Pacific railroads. These bonds were to be secured, in addition to the joint and separate guaranty of the two railroads, by the deposit with the trustees of the Burlington stock. Practically all the stockholders of the Burlington road accepted the offer, and without the use of any of their own capital the two Hill roads secured the absolute control of one of the finest railway systems in the world.

The evil of the pyramiding of credit by the issue of collateral trust bonds occurs when the earnings of the road whose stock is acquired fail to permit a dividend sufficient to carry the interest on the collateral trust bonds. As in the case of the fixed rental, the plan works very well so long as the earnings of the newly acquired road equal or exceed the cost of carrying it. But railway earnings fluctuate. And the experience of several roads which have followed this plan of consolidation has been very unfortunate. In fact the receivership of the Toledo, St. Louis and Western Railroad in 1914 was due to this cause and this cause alone. In other receiverships it has been an important contributing cause. Nevertheless the collateral trust bond has been and is still used as the simplest and distinctly the cheapest means of pyramiding railroad properties.

**4. Outright Purchase of Roads.**—The fourth general method of consolidating railroads is by complete outright purchase. It is the most expensive method, requiring a large outlay, but it results in the most complete and permanent union possible among railroads. Sufficient money must be advanced by the purchasing road to pay for the outstanding stocks of the road to be acquired and in addition sufficient to meet all its outstanding liabilities. Because of this heavy outlay of capital, the outright purchase of one road by another is resorted to ordinarily only if the road is small, so that the

actual money outlay is relatively insignificant, or else if it is possible to arrange a direct transfer of liabilities.

A purchasing road may, for instance, be able to command enough money to buy the entire outstanding stock of the road it desires to control, and to pay off all the debts of the road except a single issue of bonds. The first road will then acquire title to and complete ownership of the second road subject to the single remaining bond issue. In technical language, the bonds remaining outstanding are "assumed" by the purchasing road. This explicit assumption of the bonds of a small line has, at times, been the only price a large and established railroad has been required to pay for the acquisition of a small line. The Washington County Railroad of Maine, for instance, completed in 1899 through the efforts of Grant B. Schley, a prominent New York banker, failed to meet operating expenses. In 1903 the proprietors consented to refund their issue of over \$2,000,000 of 5 per cent 50-year bonds, due in 1948 and representing the construction costs of the railroad, into  $3\frac{1}{2}$  per cent bonds due in 1954; and agreed to surrender to the Maine Central Railroad their entire stock interest in return for the guaranty by the Maine Central Railroad of interest and principal on the new bonds.

## CHAPTER XX

### THE PUBLIC UTILITY HOLDING COMPANY

**Control over Many Small Companies.**—One of the most remarkable illustrations of corporate consolidation with some degree of individualization of parts is represented by the public utility holding company. This financial device represents a means which gives concentrated financial and operating control over small independent public utilities, widely separated geographically.

In the simplest form the public utility holding company consists of a corporation organized under the laws of some state, which permits its corporations to hold the securities of other corporations in its treasury. It acquires at least a majority of the stock of local gas, electric, and traction companies. Against these treasury securities it issues its own stocks and bonds. In brief, the holding company acquires a control of the equities of local utilities, and through the ownership of these equities exerts a direct administrative control over the operation of the local utilities themselves—it is a kind of industrial combination applied to the field of local public service companies.

The United Gas Improvement Company was the first successful holding company of this kind. It has acquired the control and ownership of gas, and later electric light, plants in all parts of the United States. These are operated by 34 subsidiaries, having a combined capitalization of \$200,000,000, in addition to the \$60,000,000 of common and \$6,000,000 preferred share capital of the United Gas Improvement Company itself. Its income has steadily increased and since 1889 the company has paid regular dividends of 8 per cent. In 1918

its accumulated surplus amounted to over \$35,000,000. Since then, owing to unwarranted expansions of certain of its subsidiaries, the financial responsibility of which fell back upon the shoulders of the holding company, the United Gas Improvement Company has lost ground relatively and absolutely.

Its early success attracted imitators but in many cases the covert purpose of these imitators seems to have been to secure a promotion profit rather than a profit through economies and efficiencies in the operation of the local utilities, and in consequence these later holding companies have seldom proved conspicuously successful.

In a given instance it is sometimes difficult to distinguish between the small holding company and the large operating company, especially when all the municipalities served are in the same locality but the operating plants are physically distinct from each other. And any attempt to draw an arbitrary distinction between the two must end in confusion, for in actual experience there are countless combinations. Yet the cases to which special reference is made in this chapter are those which are the holding companies of many individual operating companies distinct from each other in organization, management, and financial structure.

**Advantages of the Public Utility Holding Company.**—The advantages of the public utility holding company over the independently owned and operated local utility have often been reviewed. Nowhere have these advantages been more clearly expressed than in a certain brief filed May 11, 1914, with the Interstate Commerce Commission of the United States Senate with reference to Senate Bill No. 4160:

The holding company unites under one control and management the public utilities of several communities. The increased volume of business so obtained enables the holding company to make the expenditure necessary to secure a thoroughly com-

petent executive, engineering, and operating staff, whose services are available to all of its subsidiaries. Thus, along with the resulting increase in efficiency, the expenses of each subsidiary are materially reduced. Expenses are further reduced by the standardization of materials and supplies, and by the purchasing of such supplies by skilled purchasing agents in large quantities in a far wider market and upon much better terms of credit than could possibly be secured by the separate local companies acting independently. The centralized expert management effects further economies in the cost of production by the standardization of operating and accounting methods. Plants are combined and construction work is standardized, so that equipment outgrown by one community can be utilized by transfer to another smaller community, instead of being discarded as useless; in this way the enterprise is run with a minimum amount of capital, and depreciation charges are materially lessened. The distribution of the business over an enlarged territory "averages the risk" and secures the holding company against irreparable damage from purely local causes. All of these improved conditions operate to increase the attractiveness of the enterprise to the investor, and, consequently, to bring about the very great economy of decreased cost of capital and the resultant fixed carrying charges.

In addition to these general advantages the small component of a large holding company has certain distinct advantages in the sales of its service. This sale must be made with foresight and intelligence so as to provide the maximum revenue for a minimum of capital investment and operating expense. Upon the successful solution of this problem depends the success or the failure of the small utility.

It has become universally recognized that an intelligent placing of the new business of a public utility, especially an electric company, is even more important than the new business itself. For this reason new business campaigns are carefully planned by the new business engineers of the holding company, put under the charge of a man or woman who follows definite prescribed plans. The primary lines and transformers or the

mains are plotted, the points and areas of undersaturation are noted, and the new business solicitor concentrates his energy upon these points or areas. The trained solicitors are moved about from one district to another and from one subsidiary to another, according to the immediate needs. Ordinarily they carry on their work independently of the local management, and their compensation usually consists, in part if not altogether, of commissions on the new services they succeed in securing.

**Advantages in Financing.**—But after all has been said, there is little doubt but that the most conspicuous help that the holding company renders to its subsidiary is in financial matters. This shows itself in two ways. The holding company assumes the obligation of rendering both temporary and permanent financial aid to its subsidiary operating companies.

The outstanding problem of all public utilities since the beginning of the century has been the financial problem of obtaining the money necessary for improvements and extensions. Since the widespread adoption of the Lowe system of gas manufacture and the universal substitution of alternating for direct current machinery for electric companies, the technical advances in the utilization of gas and electrical energy have outstripped the capital available with which to take advantage of these advances. Because of their public nature, the return allowed by commissions, the courts, and public opinion on the capital invested in utilities has never been as liberal as that available to the capital invested in a well-managed bank or manufacturing company. They have bid for capital more by the permanence and the stability of the industries than by offering liberal interest returns. As a result, that portion of the savings fund of the community available for the extensions and improvements of public utilities has been inadequate to public demands. Severe competition en-



sued among the utilities themselves for what was available, a competition stimulated by the incessant clamor of the public for improved service.

In the presence of this competition for capital, that utility has fared best which has had some direct financial support. This support has been given by the holding company. By the ownership of the controlling shares—the equity, as it were—of a number of utilities, the capital available from the treasury of the parent company is passed over to the subsidiary to be used under such conditions that it does the greatest benefit. Weak subsidiaries are tided over critical periods—often by the use of the credit of the stronger subsidiaries—and the credit of the whole organization is made available to those companies which are so small or so deficient in earning capacity that they have no independent credit.

The simplest means, and the one invariably adopted when the credit of the subsidiary is strong, or at least as strong as the credit of the holding company, is to have the subsidiary issue its own bonds and preferred stocks, which are then sold for its account by the financial department of the holding company. And the indirect help which the holding company renders, even though it does not indorse the securities, is very great. If the holding company believes it expedient to reinforce the credit of the subsidiary by its own credit, it may either indorse with its guaranties the subsidiary securities, or it may issue securities of its own based on the subsidiary stocks, notes, and bonds acquired for its treasury. But these guaranteed bonds and collateral trust bonds, having been issued frequently in the past, without a substantial backing of real property of the subsidiary, these indirect methods have fallen out of favor. By reason of these abuses and the increasing strength of the larger holding companies which have weathered successfully the critical periods of the Great War there has been an increasing use of holding company preferred

stocks and debentures for meeting the costs of subsidiary expansions.

**Financial Structure.**—A study of their financial structure presents difficult problems for there is, usually, hopeless confusion in reaching both the net capitalization and the net earnings. This confusion is due to the fact that both subsidiaries and holding company have securities outstanding, some of which are held among the companies, some held by parent companies as collateral on the basis of which other securities are issued, and some, finally, are in the hands of the public. These last only are of significance in estimating either capitalization or earnings, because intercompany securities are, in the last analysis, only bookkeeping devices.

To reduce the capitalization of the holding company to some kind of intelligible form, an exhaustive study was made of the gross and net capitalization of twelve typical holding companies. These twelve holding companies and their subsidiaries had outstanding approximately two and a half billion dollars of securities. Of this amount about two-fifths were represented by bonds, two-fifths by common stock, and one-fifth by preferred stock. Of the two and a half billion dollars only three-fifths were actually owned by investors, approximately a billion of this being in bonds bearing fixed charges; and of the remaining \$500,000,000 half was in preferred and half in common stocks. The rest of the securities, about 40 per cent, were held in the treasuries of the holding or subholding company. The complete control was vested in the common stock, which represented only about 10 per cent of the outstanding securities.

The problem of constructing standardized income and expenditure accounts of the holding companies and of accounting for profits between holding company and subsidiary presents serious difficulties. One perplexing problem is to get the earn-

ings of the subsidiary into the treasury of the holding company. If all the securities of the subsidiary are owned by the holding company, then the method and the amount of compensation the parent may demand of its subsidiary is entirely a question of bookkeeping. But if there is a considerable minority ownership in the securities of the subsidiary, then it becomes a matter of importance whether the earnings of the subsidiary are brought into the holding company's treasury partly through an arbitrary service charge in which the minority security-holders have no share, or entirely through stock dividends in which the minority interests have a proportionate participation. In an important case a holding company charged a subsidiary \$2,000 a year for its services. The Commission ruled that this was all the rate payers were called upon to bear, even though it could be shown that the local utility could not obtain services of equal value by other means except at a much greater cost. The American Telephone and Telegraph Company levies on each of its subsidiaries a charge of  $4\frac{1}{2}$  per cent of the gross receipts for the services of its central organization. This includes not only the customary legal, technical, financial, and administrative assistance rendered by the holding company, but also a rental for the subscribers' telephone instruments, all of which are owned by the holding company.

There are also marked differences in matters of accounting policy. Some holding companies permit the subsidiaries to account for their entire earnings as their own corporate property, merely a part of which reaches the holding company in the form of dividends. Other holding companies obliterate entirely, apparently, the corporate distinction between the parent and the subsidiary, and claim as their earnings the total aggregate earnings of all subsidiaries, whether or not they have been legally distributed as dividends. Furthermore, there is no uniform method of computing depreciation for the plants and equipment of the individual operating companies; a holding

company may even prescribe different policies for its separate subsidiaries when state laws require different methods. Several holding companies refuse absolutely to make public the earnings of their separate subsidiaries. In some cases the earnings from local utilities are commingled with earnings from oil properties, for several of the larger public utility holding companies have acquired extended investments in oil wells and even in oil refining and distributing companies.

**Forms of Public Utility Holding Companies.**—The public service holding company heretofore described exercises absolute control over its subsidiaries. Subject to the securities of these subsidiaries in the hands of the public, it may be said to exercise absolute ownership. But there are other forms of public utility holding companies where control and ownership are neither as certain nor as direct as in these cases. Such instances are represented by three different types of public service holding companies, each organized for a single main purpose. There is, first, the holding company organized primarily for distributing investments over a large range of utilities operating under diverse managements and in diverse localities. This type is analogous to the investment company, pure and simple, especially in the sense in which the phrase is used in England. There is, again, the holding company organized for the specific purpose of enabling many small undeveloped operating companies to market their bonds during the period of their early growth. Often holding companies of this type are under the direct tutelage of equipment companies or banking houses. There is, still again, the holding company organized by engineers to hold small interests in numerous operating companies over which they exercise the managing control. These special holding companies, especially those organized to hold merely common stocks of subsidiaries operated by a single engineering firm, have not proved very successful.

## CHAPTER XXI

### THE COMMUNITY OF INTERESTS

**The Ideal Form of Organization.**—All the forms of combination heretofore described represent actual, virtually complete, consolidations of business units. The ownership and the management of the small units are thoroughly and completely merged. The component parts of a great industrial "trust," a great railway system, or a great power company, are merely parts to a completely organized whole. They have no independent ownership, no independent financial structure, and, above all, their directors have no separate power of initiative. The name of a branch line of railway may be retained and there may be outstanding in the hands of the public separate issues of bonds, but the branch line has no separate management independent of the management of the whole railway system. Its earnings are merged. Its schedules of trains are made to fit into the schedules of the whole system. If it preserves, in order to retain some old non-transferable franchise, a separate corporate structure, the directors and officers are the same as those of the whole system, or else are men nominated by them. In brief, the branch line is merged in all except its name with the railroad system of which it forms merely one of many parts.

The very closeness of the consolidation has been attended by many disadvantages not obtained in the small, mobile, and compact business unit—the owner-manager business, in which quickness of action and personal initiative go a long way to counterbalance ignorance and lack of organization. In the "big business" often the largest single factor in an industry—great size and a kind of perfection of mechanical organization

—do much to counterbalance the lack of individual initiative and the lack of personal contact with employees and customs.

The type of mind which has been conspicuously successful in organizing and developing big businesses thinks and acts in terms of economic generalities. It is endowed with great imagination. It suppresses differences and exaggerates likenesses. To such a type of mind details are abhorrent; business is to be unfolded like the plot of a great drama, in which individual character and incident are significant only as they further the end. Mere size is its own justification. And under the spell of men of this type business strategy becomes a mad rush toward consolidations, holding corporations, and other devices which make it possible for a few men to control large amounts of labor and capital. It is a very pertinent question: Can there be a form of business organization which retains the initiative and responsiveness of small size and at the same time the scope and integration of the big organization?

**Evolution of Business Organization.**—Historically business organization has moved in great cycles in its effort to answer this question. At the close of the Civil War and down to the depression following the panic of 1873, American manufacturing business consisted for the most part of small independent units. These simple businesses were owned and managed by a single individual, by the heirs or the members of the family of the founder, or by a group of local merchants who subscribed to the stock of the local mill. However existing, whether proprietary or a locally owned corporation, the business was narrowly limited in size and in scope of activities. Competition was severe. Co-operation of any kind was unknown, and motives of industrial independence and isolation governed the business policy of American manufacturers.

In the years before the panic of 1873, railroad construction and consolidation had so widened the area within which com-

peting manufacturers could sell their product that in the boom period following the depression of the middle seventies competition was extended over a wider field than ever before. Under the stimulus of an increasing volume of business and rising prices, manufacturers invaded each other's territory. Competition reached an unprecedented degree of severity, and in this competition the larger units were able, by rebates and midnight tariffs, to secure more advantages from the carriers than the smaller units through rampant individualization and cutthroat competition. The pendulum began to swing toward larger units and co-operative trade practices.

**Gentlemen's Agreements.**—The first stage in this evolution, both historical and logical, was the gentlemen's agreement governing the area of competition. Often as a result of a casual meeting manufacturers agreed not to send salesmen into each other's territory. The second step was the gentlemen's price agreement, likewise often the result of a mere casual conversation. The manufacturers agreed upon a minimum base price, below which they would not sell their goods. In both of these instances, there were no written contracts, for even before the passage of the Sherman Act in 1890, it was vaguely felt that all such agreements were contrary to the common law of restraint of trade. Business men merely agreed that they would be bound by their verbal agreement "on their honor as gentlemen."

The gentlemen's agreements with regard to the territorial distribution of sales and with regard to cutting prices were both usually broken. The manufacturers could not be held in law or equity to observe their agreements, and there was no other way of enforcing them. Competition which had extended over years, possibly over generations, could not be annulled by a verbal understanding the very nature of which was at variance with our Anglo-Saxon law. Accordingly,

some kind of loose but centralized and direct control had to be voluntarily endured by the manufacturers in order to render their verbal agreements effective. Such a centralized control was first accomplished by the pool.

**Pools.**—All pools had as their immediate object the direct control over the production or the distribution, or both, of all the co-operating manufacturers. This control was invariably vested in a central bureau which attempted to exert a mild dictatorship. On the relative strength of this dictatorship and the means at hand to enforce it depended the relative strength of the pool and its position in the evolution from the rudimentary gentlemen's agreement to the true business consolidation.

The managers of the simplest pool sought merely to distribute the output of the members. The central bureau, usually represented by a paid secretary, apportioned the business available in accordance with a prearranged schedule. This schedule sought to aliquate to each manufacturer an amount of the available business that was proportional to his total producing or distributing capacity. But such pools were ineffective because the central bureau had no real authority to hold each manufacturer to his proportional allotment. A second type of pool required that the manufacturers belonging should bid among themselves for contracts, the proceeds of the bids being distributed among the members of the pool. The *cause célèbre* of this type was the pool of manufacturers of cast iron pipe, known colloquially as the Addystone Pipe Pool. The case acquired considerable notoriety because the decision of the United States Supreme Court condemning the organization of their particular pool constitutes an important, perhaps nodal, point in the evolution of the judicial interpretation of the Sherman Act of 1890. A third, and by far the most important type was known as the "paying-in



and drawing-out" pool. The cases of this type were very numerous. They were based, as were the two simpler types, on the distribution of the available business according to the total net capacity of the manufacturers belonging to the pool. Those manufacturers whose sales exceeded their proportioned allotments were to pay to the central treasury the total net profit realized in excess of their allotment. And on the other hand, those manufacturers whose sales fell below their proportioned allotment drew from the pool's treasury the net profit on sales representing the difference. No manufacturer belonging to the pool could, therefore, obtain an increased profit through an increase of sales. Thus there was presumably no incentive for a manufacturer to cut under the selling price agreed upon by the pool in order to increase his sales. But even these closely organized pools failed of their object either because of the growth of outside competition, or because of the deceit and perfidy of the members. In the instance of one such pool the history of which came under the writer's observation, an important member kept two sets of books. One set showed his true sales and was kept for his own information. The other was a fictitious record of sales prepared especially for the inspection of the pool's auditor in such a manner as to show much smaller sales. In this manner the manufacturer could make a surreptitious profit through an excess of sales beyond his allotment without being forced to pay back the profit to the pool's treasury. This ingenious plan was soon discovered by another member and it immediately caused the disruption of the pool.

In consequence of their lack of force, pools of all descriptions tended to break up. After repeated efforts manufacturers adopted the trust form of organization and later the true corporation, but these later and advanced stages in the evolution of business organization have been treated already in the sections dealing with industrial consolidation.

**Intermediate Forms.**—Notwithstanding the development of the more highly organized forms of business organization and the universal acknowledgment of the efficacy of the large corporation as a means of carrying on certain types of business, the defects of mere size are apparent. These were discussed at some length in a preceding chapter and need not be repeated here. But the thing of importance is that these defects are being more and more fully recognized, and with this recognition a reaction has set in toward the adoption of the smaller business unit. Mere consolidation—mere bulk—is not of itself and of necessity a source of strength. With this acknowledgment the permanent, if not the paramount, problem of our contemporary industrial democracy becomes the working out of the relations between the large and small business, and the bearing of each upon the problems of the economical use of labor and capital. The solution is not in working back over the road along which industrial evolution passed from the small business to the great corporation. The historical forms through which this evolution passed were negative. Gentlemen's agreements, pools, and the like, had as their object the stifling of competition. The intermediate forms now sought are positive. Industry is in a flux. Ease of transportation, the general dissemination of technical knowledge, the scarcity of labor, the great accumulation of funds waiting for investment—all facilitate the formation of large units. In consequence the intermediate forms which are now coming into prominence seek to temporize the inherent defects of big business with some degree of the freedom and spontaneous initiative of highly individualized and independent parts. An exhaustive summary of such forms is not within the present purpose, but two general movements deserve rather detailed attention both because of their own significance and because of the balance between the large and the small that they illustrate. They are the association—a

loose, but co-ordinated form of union—and the community of interests—a closer form of union with a limited concentration of financial responsibility.

The problems today are not so much those of suppressing competition as those of mutual protection against the demands of labor unions, the assessment of inordinate taxes, and the enactment of unfavorable tariff legislation on the negative side; and the development of trade advantages in the presence of competitive substitutes and the exploitation of foreign markets on the positive side. Both the district associations and the trade associations illustrate these problems.

**District Associations.**—The Manufacturers' and Employers' Association of Taunton formed in 1917 is a good illustration of the direct association. In 1920 it comprised 40 different employing corporations representing upwards of 7,000 employees. Its by-laws and constitution are somewhat illusive and propose as the objects of the association the furthering of the industrial and commercial welfare of the Taunton district, and fostering among the members of the association "a spirit of friendliness and progress." In detail, it proposes to equalize and specialize wages, to reduce labor in "turnover," and to protect the Taunton district against unfair freight rates. Its officers consist of a president, whose position is purely honorary, and a salaried secretary, upon whom devolve the affairs of the association. Almost from the first, its problems centered about labor, and to meet these labor problems in detail the association at an earlier date adopted certain general policies. The association advocates that the wages paid in any one plant be not lower than the wages in another plant doing the same kind of work. The association advocates that the hours of labor and general working conditions be uniform through the district, unless circumstances determine that they be otherwise. The association seeks to have knowl-

edge of all labor conditions throughout the area. It carries on an employment bureau for the benefit of the members and labor in general. If a strike threatens, the association through its secretary and its executive board conducts an investigation on its own behalf. If this investigation shows that the employees are demanding no more than economic conditions warrant or other manufacturers engaged in the same business are paying, then the association decides for the men and exerts its pressure to force the employing firm to accede to the demands. If, on the contrary, the investigation shows that the employees are making unreasonable demands, the pressure of the association is exerted to break the strike.

The organization of such an association is much stronger than the ordinary chamber of commerce. Its secretary—the title usually bestowed upon the man who serves as the general manager of the organization—exerts an almost autocratic power among the members. He may practically order one manufacturer to increase his wage schedule if it appears that the industrial peace of the community requires it, or he may for the same reason order another manufacturer to decrease his. If there is a strike in the plant of a member of the association, it becomes a matter of concern of the entire association. If it is obvious to the acute intelligence of the association's secretary that the men on strike have a justifiable ground for complaint, or that a quick settlement of the dispute is wise from the point of view of economic expediency, then the secretary will adjust the differences, quite generally in favor of the men, and order the manufacturer to accept the decision. If the manufacturer refuses he is dropped from the association. If, on the contrary, it is apparent to the association's secretary that labor troubles would be fomented in other industries should the striking laborers obtain their demands, or that their success would establish a dangerous precedent, then the association as a whole, on the recommendation of the secretary

or an investigating committee, assumes the responsibility for the strike. The manufacturer suffering from the labor trouble obtains the support of the manufacturers of the entire district. The association bears the expense out of the proceeds of assessments levied on all members.

**Agricultural District Associations.**—District associations are not confined to industrial localities where the management of labor is perhaps the most insistent problem. They are very common and very influential in agricultural districts devoted to the production of a single commodity. Here, however, the problems that absorb the attention of the association are not those of production but of distribution. In consequence the products of all the members of the association are marketed by the association under a single generic name, such as "Sunkist Oranges" or "Sun-Maid Raisins." Expenses of advertising, of car-load shipments, of wholesale merchandising, which no one producer could afford to bear alone, are shared by all the members of the association in proportion to the production of each. True, the association's secretary may prescribe conditions of excellence with which the fruit of each member must comply before its sale is undertaken by the association, but these conditions have regard only to character or quality of the product, not to the methods followed or the economy in raising the product or the wages and working conditions of the labor employed by the planter. These are left to the personal initiative of each member of the association.

There are many associations which meet to a greater or less extent the general description of these district associations. The great difficulty, as with all associations, pools, and voluntary trade agreements, is to secure such unanimity of membership that the decisions of the association command respect and secure the strength that comes of the voluntary action of a united body. Membership is entirely a matter of self-

interest. A weak association defeats its own ends, and this weakness may be due either to lack of support from the members of a district, or else to a vacillating, stupid, or headstrong secretary and executive committee. Experience has shown it to be unquestionably true that district associations of this character achieve worth-while ends only if they receive practically the unanimous support of all the manufacturers within the district, and are led by liberal-minded, tolerant, and courageous men.

**Manufacturers' Associations.**—Another type of association is that of the manufacturers or producers in a given line of business. Membership is based on the nature of the product rather than on geographical location. Their purpose, unlike that of the earlier pools, is positive—to familiarize the public with the products of the industry, to secure tariff legislation favorable to the industry, to prevent repressive or harmful legislation, to retain competent counsel to represent the industry at judicial hearings.

One of the best examples of such a coherent and highly organized manufacturers' association exerting itself both in the direction of increasing the demand for the products of the industry and in the direction of defending the industry against legislative attack, is afforded by the American Manufacturers' Association of Products from Corn. As this association is, by reason of the small number of concerns engaged in the wet milling of corn, rather a compact and highly developed manufacturers' association, it is worth while to examine its tenets and its activities at some length.

For many years the American manufacturers of glucose and starch made from corn had fought against a popular prejudice against the use of glucose as a food. In the minds of some people this prejudice was due to the similarity between the words "glucose" and "glue"; in the minds of others it

was due to the original use of sulphuric acid as a catalytic agent by Kirchof and by the early commercial manufacturers. But the missionary work carried on by each manufacturer was desultory; it was an unimportant part of his general policy in advertising. In 1912, it occurred to certain men in the industry that this work of educating the public to the uses of the products of corn and of defending the industry against popular prejudice could be carried on best by an association in which all the manufacturers concerned contributed to the expenses in proportion to the benefits derived from the work. Accordingly such an association was formed March 12, 1913.

The objects of the association are specifically defined by its constitution as:

First. To maintain the standard of purity and quality of products from corn in all possible ways.

Second. To take united action in correcting all opinions adversely and unjustly affecting the consumption and uses of products from corn.

Third. To educate the dealers in and consumers of products from corn in regard to the purity, wholesomeness and uses of said products.

Fourth. To take united action in respect to all questions before State or National Legislatures wherein untrue impressions in regard to the nature and uses of products from corn are involved, and whereby unjust rules, regulations, standards or laws restricting or adversely affecting the sale of products from corn may ensue.

In addition to these efforts to increase the consumption of corn products, the association has fought legislation which might tend to decrease their use or further prejudice the people against them. For example, it prepared the case for the glucose manufacturers in the "Hearing before Illinois State Food Standards Commission in the Matter of Investigation of Corn Syrup (Glucose) and Its Use in Foods, January 22, 1916."

And the association has been active whenever and wherever efforts have been made in state legislatures to enact statutes prohibiting, restricting, or limiting the sale or consumption of corn products, particularly glucose.

The activities for increasing the demand may also take the form of exploiting foreign markets. Many manufacturers' associations, notably in the copper, steel, and textile industries, had bent their efforts toward foreign selling—even before the Great War. And when the liberal privileges of the Webb Act are more fully understood the activities of these associations in this direction will undoubtedly be increased.

The other important activities of these associations are in the direction of the protection of the industry against legislative or political attack. The manufacturers' associations in the textile industry, for example, have already sought to influence tariff legislation for the benefit of their own interests; associations of manufacturers of boots and shoes have bestirred themselves when the tariff on hides came under discussion. Many industries are subject to indirect attack through special legislation. The Investment Bankers' Association has fought, in the lobbies of the state legislature and in the courts, the enactment of blue-sky statutes. Associations of food manufacturers have fought "labeling" and "branding" laws; associations of fire underwriters have fought state fire insurance; and liability underwriters the various forms of compulsory state liability insurance. In all these and in similar cases, the associations exist—indeed, they were often organized—for defensive purposes, but their influence usually develops along constructive lines.

#### **Community of Interests in Production and Distribution.—**

A community of interests represented by directed dependence of the units on each other for the purchase and sale of some commodity is another form of loose combination relatively



common in modern business. It works out in the following manner. A manufacturer of an expensive or complex product requires some semifabricated material or some specialized part. He requires this material or this part in large quantities, in regular and dependable deliveries. Yet his own business requires all his time and capital and is of an absolutely different character. He may make automobiles, for which starting and lighting generators are required. Yet the automobile business is absolutely different from the electric business. He may corrode white lead for painters, for which large quantities of metallic lead are required. Yet a successful corroder and a successful miner can with difficulty be combined in the same person. Under these circumstances an agreement is entered into between the two manufacturers under which one agrees to manufacture the product required by the other in such quantities and according to such specifications as may be mutually decided upon, and correlatively the other manufacturer agrees to purchase the product under pre-arranged conditions of delivery and payment. The buying expenses of one and the selling expenses of the other are saved, and both are relieved of uncertainty regarding future supply and demand. Once the agreement is undertaken, each becomes mutually important to the other; and if the product manufactured by one and purchased by the other is a relatively highly specialized part, like a generator for an automobile or a governor for a turbine, the two manufacturers might even be said to be necessary to each other. At all events there is a very close community of interests.

During the last decade it is probable that the automobile industry showed the most conspicuous use of this kind of community of interests among business units. The industry developed very rapidly. It absorbed in its rapid growth very large amounts of capital. Yet investors regarded it as at best uncertain, even precarious, so that automobile manufacturers

were forced to secure most of their capital from local banks and from the reinvestment of surplus in the business. As a result they were forced to limit their scope of operation, and one of the ways in which this was done was to contract with other manufacturers for the purchase of special parts and accessories.

**Community of Interests in Stock Ownership.**—Distinctly the commonest form of community of interests, in which individuality and unity of purpose have been successfully combined, is in businesses loosely bound together through the common ownership of minority stock interests. This kind of community of interests is found in an industry where there is no other sign of co-ordination and it is especially common in a manufacturing industry constituted of many separately owned plants confined to one geographical locality. In a one-industry town, for example, a dozen or more competing plants are engaged in the production of one and only one product, like the jewelry of Attleboro, the chairs of Gardner, or the shell goods of Leominster. In such a case a few prominent manufacturers, men recognized to be the leaders of the industry, will be found to be directors in a number of competing factories. They have small stockholdings in these competing organizations so that their horizon extends to the welfare of the industry as a whole and is not confined to one factory. Through the influence of these men some kind of harmony among all the producers in the town or locality is obtained. In no sense can it be said that there is real consolidation of operating plants, but there is a real co-operative unity based on mutual financial interest in each other's welfare and on a mutual understanding of each other's business problems.

**Community of Interests in Foreign Trade.**—One of the most recent of these corporate community of interests, and

one perhaps destined to achieve considerable importance, is found in the field of our rapidly developing foreign trade corporations. As pointed out in another connection these enterprises arose in response to the opening up of new avenues of foreign trade in consequence of the changes brought about by the Great War. A foreign exporting and importing business to be successful must have close affiliations with manufacturing, transporting, and banking companies. In fact its business is primarily that of supplying a service intended to bring about the efficient co-operation of these agencies in foreign commerce. Accordingly, the foreign trade companies, in order to strengthen their position in this country and to fortify their agency business abroad, have sought to secure a community of interests among businesses upon which they are directly dependent. This takes the form of direct stock control in some instances, but such control involves a large investment of capital, whereas the trading company would ordinarily prefer to keep its available capital in its own business. Unless the trading company, therefore, has large resources, or can acquire control of the affiliated business with only a small expenditure, it must content itself with resting its community of interest on the ownership of less than a majority of stock. Great as are the financial resources of the American International Corporation, and strong as is the community of interest among its affiliated companies, its influence in three of the largest and most important of them is assured only through the ownership of distinctly less than a controlling stock interest.

**The Family Group.**—Probably the most comprehensive and highly organized community of interests is when one large and important corporation owns a share in a great number of small corporations, all carrying on an allied business, and the whole constituting a kind of family group. This kind of

organization is not common because it is too intricate to develop easily. Nevertheless when a comprehensive plan is evolved by a business genius possessing a true breadth of understanding, it represents what is probably, in a sense, the highest type, and the furthest development, of modern corporate organization.

In its ideal form this type of community of interests requires a strong central corporate organization, possessing almost unlimited credit and unbounded public confidence. It must be managed by men who have the rare sense of inspiring confidence and independence of action in higher executives and the ability to promote true co-operation without making the affiliated concerns and their officers mere cogs in a great machine. In other words, it must solve, practically, the theoretical problem of the proper balance between concentration of control and administration, and spontaneity of individual effort.

Probably no business organization would profess that it has solved this problem, in a sense the central problem of business administration. But some have come far nearer to a solution than others. Among those which have consciously sought to obtain a true community of interests and preserve a spirit of real independence among the subsidiaries is the group of affiliated enterprises known as the "General Electric family." The success with which the community of interests idea has been worked out by the managers of the General Electric Company is worthy of something more than passing comment.

The General Electric Company's community of interests, as now constituted, consists of subsidiaries and affiliations of five different types, differing in the closeness of control exercised by the parent organization. There are certain subsidiaries, owned entirely by the parent, of which the parent company exercises entire control and management. These may be

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looked upon as loosely articulated departments of the main business. The other four types of affiliated corporations vary in the degree of closeness of union with the parent concern. In none of these types of corporations, notwithstanding the General Electric Company may hold the entire stock, does it presume to exercise an administrative control. In brief, these types are: (1) those companies in which the General Electric Company owns a majority of the entire stock, but which are managed by a separate organization quite independent of the parent; (2) those of which the General Electric Company may own a majority stock, indirectly through affiliated interests, but which are operated as separate and entirely independent businesses; (3) those in which the General Electric Company owns only a minority stock interest, but which operate in harmony with the whole organization; (4) those with which the General Electric Company has operating and pooling agreements.

## CHAPTER XXII

### FINANCING OF EXTENSIONS FROM THE PUBLIC

**The Problem of New Capital.**—The four preceding chapters have dealt with the forms of business organization to be followed by an expanding business and by consolidations. Except incidentally, little reference was made to the means available; yet this is a question of great importance. During times of large surplus of investment funds, when the rates on bank loans are low and long-term securities are in great demand, the corporation has merely to justify its policy of expansion by the most superficial analysis in order to get the requisite new capital. But when surplus investment funds are scarce and banks are restricting rather than expanding loans, the availability of money becomes the crux of any policy of expansion. It is this question of the sources of new capital that must be fairly faced under any circumstance, whatever the resources of the corporation.

**The Investment of Earnings.**—It is illuminating to look at the life history of a corporate enterprise as consisting of three great periods, analogous to the periods under which the physiographer describes the life cycle of land forms. There is a period of youth in the history of every corporation; there is a period of maturity; and there is a period of old age and decay. In a thoroughly typical case the period of youth is the period of growth. But it is growth from within, since it is well-nigh impossible to enlist the aid of outside capital in a young expanding industry. Much if not all of the capital required for this growth must therefore be extracted from the business itself, namely, from the reinvestment of earnings.

And this is conspicuously true if not only the corporation itself, but the industry in which it operates, is young and growing. Neither banks nor investors, neither old women nor speculators, care to assume the double risk of both an undeveloped industry and an untried corporate management. All the funds for expansion must therefore come out of earnings. Gradually as the industry develops and exhibits its inherent earning capacity or as the corporation shows successive years of liberal net earnings, in other words, as it approaches the maturity period of its life cycle, capital may be obtained from banks and investors. But even then the investment credit of a corporation is very much improved if investors feel that the managers of the industry are willing to reinvest at least a part of their annual earnings in the business for which they seek capital from outside sources.

Expansion by means of the reinvestment of earnings, rather than by the issue of additional securities, is easier for industrial, insurance, and banking companies than for railroads and other public utilities. The rate of turnover of the capital is so much greater, and the proportion of fixed investment to the total gross business so much smaller, that the industrial can "finance itself" under ordinary circumstances. This explains why great industrial enterprises like the United States Steel Corporation are able to grow with such rapidity without increasing their bonds and stock appreciably, and why great railroads like the Pennsylvania are forever putting out new issues of securities. It is not so much a difference in fundamental financial policy, as it is a difference in the nature of the business.

**Short-Term Borrowing.**—Temporary financing may be based upon two different financial presumptions. In one case the directors of the corporation may issue the short-term notes in order to pay for extensions and improvements in structures and other permanent or fixed property, on the assumption that

the market for bonds will be better when the notes mature than at the time of issue.

The policy of issuing notes in anticipation of the issue of permanent long-term bonds is of comparatively recent origin. Prior to 1900 it was the custom of all large corporations, particularly railroads, to anticipate their capital needs and sell bonds or stocks before the money was actually needed.

But aside from the fact that the use of short-term notes has been expensive, their issue is fundamentally wrong. A quickly maturing note should be given for the purchase of property only when the property is "self-liquidating." This implies that the ultimate sale of the property affords in itself the means of meeting the notes when due. The bridge of a railroad, the new warehouse of a factory, the new turbine of an electric company, will not do this. Given a period of years, the presence of the bridge, the warehouse, the turbine will so increase the earning capacity of the corporation that uses it that the latter will be able to set aside annually a fund to pay for the structure years hence. This is the justification, and the only justification, for the purchase of fixed equipment through the sale of long-term bonds. But it affords absolutely no justification for the purchase of equipment by the sale of short-term notes.

#### **Distinction Between Self-Liquidating and Fixed Property.**

—A very important principle of business policy is evidenced by this distinction between self-liquidating and fixed property. It applies to the method of financing all purchases of material required by an expanding business. In general, a business buys two kinds of property as it expands—more raw materials and merchandise to be manufactured or redistributed, and more structures and equipment with which to carry on its enlarged business. The raw materials and merchandise are sold within a comparatively short time and if the business



is sound a profit will be realized through handling it. Obviously the amount and the cost of these merchandise purchases will fluctuate according to the customers' demands for the finished product. Even in a business requiring a very long time for the "conversion" of its material, there will be, necessarily, a fairly accurate correspondence between the amount of the inventories carried and the relative demand for the finished product. During periods of marked demand—business booms—the purchases of raw materials and merchandise will be large. And, conversely, during periods of restricted demand—business depressions—the purchases of raw material and merchandise will be small. Obviously the shorter the period required for "conversion" or "turning the stock" the quicker will be the response and the more exactly will the amount of the purchases correspond with the amount of the sales. But even in businesses requiring long periods for "conversion" there is a definite and approximately accurate correspondence.

The other types of purchases made by an expanding business are structures and equipment. These are not resold. They are incorporated, as soon as acquired, into the fixed and permanent capital of the business. They cannot be contracted during periods of depression. They are definitely and finally permanent. Once having been acquired, the structures and equipment of a business bear no relation whatever to the volume of business, nor do variations in the volume of business react back on the amount and cost of the structures and equipment.

**Financing Self-Liquidating Property.**—The sale of raw materials in a finished state and the resale of merchandise brings back into the corporation's treasury at least as much and probably more than the raw materials or merchandise cost. This cost may therefore be fully met by the sale of notes, on the reasonable assumption that the money with which to pay the

notes can be realized from the sale of the finished products. Notes serve, therefore, merely as a means for enabling a corporation to carry a larger stock of raw material, goods in the process of manufacture, or merchandise in the process of being distributed. As the demand for the finished products expands, the raw materials or merchandise that must be purchased expand proportionately; and with the increased stock of goods more money must be tied up in the inventories. This can best be obtained by temporary borrowings. The notes should be arranged to mature at about the time the corporation would reasonably expect to receive payment for the finished goods. This will represent the time required to manufacture and distribute the goods, the average period that finished goods remain in stock before their sale, together with the time ordinarily required to collect the account from the customer. Clearly, each of these three factors will vary with the technique and the customs of the industry, but gross averages within a single industry can be determined beforehand with a fair degree of accuracy. The important and vital fact is that the volume of outstanding notes can be made to fluctuate directly with the volume of the inventories. One is the obverse of the other. With the sale of notes, inventories are acquired; with the sale of the inventories the notes are paid.

**Financing Fixed Property.**—Permanent improvements are not resold to liquidate the obligations which paid for them. These obligations can be paid for only through the increased earnings of the corporation; the increased earnings should be sufficient at least to meet the interest on these obligations and to amortize, by means of a sinking fund, the improvements before they are worn out or become obsolete. If improvements are made wisely the business will show exactly these results, and ultimately this gradually accumulating fund may be used to pay the obligations incurred in acquiring the im-

provements. Obviously these obligations must run for many years; they must be represented either by stock or by a funded debt that matures after an interval long enough to allow of sufficient accumulations in the fund to meet the debt. Permanent improvements should be paid for from the proceeds of the sale of stock or long-term bonds.

But the question of whether bonds or stocks should be sold to pay for permanent improvements is not so easily answered. If it seems expedient for the corporation to sell bonds, the further question arises whether they should be of short or long maturity, and the character of the bonds best suited to the particular circumstances. If on the other hand, it seems expedient to issue stock, it must be decided whether the shares shall be common or preferred. In any case the directors of a corporation seeking capital for expansion must decide whether the new securities shall be sold to independent bankers or to stockholders. To consider these questions aright, it is necessary to consider first certain general advantages pertaining to each class of security, and apply the principles of such an inquiry to different types of corporations.

**Advantages of Selling Bonds.**—There are certain specific advantages which the issue of bonds affords, not ordinarily possessed by a new issue of stock. The most apparent is the lower rate at which the new capital for expansions may be secured through bond issues rather than stock issues. A bond security is stronger than a stock, so that the ultimate compensation for the risk which the investor will demand is correspondingly less. But in addition to this is the fact that the market for considerable amounts of bonds of established enterprises is wider than for a large new issue of stock. Consequently the cost of merchandising is less.

Aside from economy of issue, bonds would permit a continuation of a concentration of control. Stock would ordinarily

be granted voting power, and as the corporation grew in size the new stockholders might very easily outnumber the old. The proprietors might well take the position that it were better to continue their old business within small compass than to extend it through the capital furnished by a group of outsiders possessing a right to interfere with the established order.

Still another advantage to be gained by selling bonds, rather than stocks, is the comparatively large blocks of an issue that can be sold to a single customer, thus reducing considerably, for either the corporation or the bankers, the actual expense of distribution. It is exceedingly difficult to place large amounts of stock except among the directors or their associates, because no man would desire to become a heavy stockholder in a corporation with its attendant risks, without securing some voice in the management. But life and other insurance companies, banks, trustees of private funds, the treasurers of religious and eleemosynary corporations, stand ready to absorb large amounts of bonds without requiring at the same time a voice in the management.

**Advantages of Issuing Stock.**—On the other hand there are many types of corporations which cannot wisely issue bonds and are confined in all their financial operations to stock issues. Such corporations include banks, insurance companies, and manufacturing companies situated in states which discriminate in their tax laws against investments in bonds. Other corporate enterprises, such as mines, patented inventions, retail stores, and the like, would wisely do all their financing by means of stocks, although there are no laws that prohibit the issue of bonds, were it possible to sell them.

The payment of the costs of the expansion of a corporation by means of the sale of new stock issues even when bond issues are possible, has besides certain very positive advantages over expansion by means of bonds. The greatest of these

is that stock carries no irrevocable promise of dividend payment. The payment of interest on a bond is fixed and the failure to pay it precipitates failure. Most corporation directors, no matter how successful the enterprise may be, hesitate to burden it with fixed charges, even if the future gives promise of earnings that exceed the charges many times over.

At no time in the company's history do the credit man and the banker watch a company's general credit more carefully than when a small business is expanding into a large one. The old-established lines of credit must be increased; the limit of bank loans must be raised. Otherwise the business cannot carry its enlarged inventories and accounts receivable. Just at this critical time the issue of bonds to meet the increases in the plant account would hurt, distinctly, the public credit. The bankers and merchandise creditors would naturally assume that the policy was prompted by one of several reasons: either the directors had not enough financial backing among the stockholders to secure new money from the sale of stock, or themselves lacked confidence in the enterprise, preferring to risk other people's money rather than their own, or else that they proposed to follow a different and more audacious plan of financing, the success, even the expediency, of which could not be foretold from the past. Any one of these inferences would destroy the general credit of the expanding corporation irrespective of the margin of current assets over current liabilities. On the other hand, if the directors sell to the public an issue of stock, the proceeds of which are used to extend the plant, to pay off maturing loans, and to increase the excess of current assets over current liabilities, the power of the corporation to sell its notes and acceptances will be enormously increased. From the bankers' point of view their equity has been increased by the full extent of the new capital brought into the business.

**Application of Principles to Different Businesses.**—These principles do not apply with equal force to all types of corporate enterprises. They have the greatest strength for industrials and the least for local utilities. An industrial must borrow heavily at banks in order to carry its inventories and receivables. Its earnings are not easily predicted, nor can it fortify itself against sudden changes in the demand for its product, against labor disturbances, and against unusual stupidity in management. These unpredictable elements are less in evidence in a local utility, although even here too much confidence cannot be placed on the assurance of increased earning power in which both the public service company operators and the bond-buyers place their trust. It is interesting to note also that small investors are as a rule unfamiliar with bonds, so that a corporation can secure a much wider market among small investors through the sale of stock than it can through bonds.

**Advantages of Sale to Bankers.**—In all probability the decision of the directors of a corporation as to whether they shall pay for extensions by the issue of bonds or of stock cannot be made without taking into consideration the means to be employed in selling the new securities. Two distinct means are available. The corporation directors may either sell the entire issue directly to bankers, or they may offer the securities to the stockholders in the proportion of stockholdings.

1. **Assurance of Sales.**—Perhaps the foremost advantage of the sale of the entire issue of new securities to investment bankers is the assurance of a successful sale. Ordinarily the management of a corporation spends money for improvements before the money is actually in hand. A floating debt is incurred which it is proposed to fund by means of the money obtained from the sale of the new securities. Ordinarily, too,

the payment of the bank loans representing these floating debts must be met in the immediate future; and the improvements themselves must be carried through once they are commenced. It is therefore imperative that the corporation obtain the money its plans call for; these cannot depend on the temporary fancy of stockholders nor be jeopardized by the kaleidoscopic changes of the financial markets. Ordinarily, therefore, the corporation is very glad to allow the bankers to assume these risks, even though a slightly less price is realized than if the bonds or stocks were sold directly to the final investors. It is this assurance of the immediate payment of money that ordinarily leads to the acceptance of the definite offer from the bankers, the more conservative of the directors preferring to run no risks of being caught in the meshes of an unfavorable credit market.

**2. Establishment of a Protective Alliance.**—While the relationship between investment bankers and the corporations for which they have once sold securities may not require the bankers to underwrite every issue that the corporation may thereafter bring out, still the fact that the bankers have once investigated the enterprise and decided to lend their support in financing it implies a willingness to assume at least a favorable attitude toward future issues of securities. In fact, it is one of the unwritten laws of investment banking that when a banker has once established intimate association with a corporation he shall have at least the first opportunity of bringing out subsequent issues. Sometimes this closeness of connection works greatly to the advantage of the corporations, as it protects them during periods of financial stress, when capital is difficult to obtain at any price, from being handicapped in financing improvements or in refunding old issues of securities. For it is clear that if bankers have been responsible for the wide distribution of a company's securities

in the past, they will acknowledge an obligation to protect the company in an emergency so that the value of the securities already sold shall not be jeopardized. Corporations have in several important instances actually passed into the hands of receivers, for the reason that their managers had in the past failed to effect a strong alliance with investment bankers.

**3. Widening the Market for Securities.**—Expansion through the sale of securities to bankers widens the market for the company's securities in a manner not possible through the sale of either bonds or stock to the old stockholders, and the wider the market for the company's securities the more secure it is in the control over new capital.

Small additions of capital may be obtained from time to time from the old stockholders, but ordinarily large increases of capital must be sought in the general investment market. A failure to acknowledge this principle was one of the early difficulties with the financing of the American Telephone and Telegraph Company. Finding it comparatively easy to sell large blocks of stock directly to stockholders, the directors resorted to this method of expansion continuously, during all the earlier years of the company's growth while the Bell Telephone system was being extended throughout the United States. Meanwhile, the individual stockholdings, although growing in size, were being concentrated in one geographical area where the early stockholders resided. But the demands for expansion grew faster than the savings capacity of the stockholders, or rather than that portion of their savings which they cared to invest in telephone securities. As a result the management experienced a constantly growing difficulty in finding a fair market for the new stock allotments as they were successively issued. This destroyed the real market for the stock of the American Telephone and Telegraph Company and reduced its market price below its true value, with respect



to other securities of equal intrinsic value, but possessing a wider market. In 1906 a new management, realizing that the fundamental financial difficulty of the telephone industry was its continual requirements for new capital, sought to extend the market for its shares from Boston to New York in the hope of securing a national, and later an international, market for its securities. The effort was partially successful, although it did not occur early enough to give the company the nationwide investment interest that its enormous expansion of the succeeding ten years required. What has proved true to a large extent with the telephone company has been shown to a lesser degree by the Pennsylvania Railroad.

**Relative Economy.**—Another advantage, particularly to the issuing corporation of an established reputation, is the simple fact that there are a great many different investment bankers and competition among them permits the corporation to obtain the highest price for its new securities which the general investment market permits. The business of selling securities is a highly competitive one; yet the profits of the business, if managed ably, are very large. Bankers long ago recognized that it is far better policy to purchase the issues of old, long-established, and profitable companies, even though their gross profit on each sale is small, than the issues of new corporations where the chance of a mistake in judgment is greater, and therefore the risk to their reputation is a matter of serious consideration. So it is not, with a successful corporation, a difficult problem to find a banker; the obstacle usually met with is that of inducing the banker to sell the issue on a sufficiently narrow margin of profit. For example, the New England Telephone and Telegraph sold in 1912 an issue of \$10,000,000 5 per cent debenture bonds. The bankers received only one-half of 1 per cent commission. This was an exceptionally low margin. Little advertising on the part of

the bankers was necessary and the bonds were sold within a few hours of the opening of the subscription books. It is true that few large bond sales can be completed on as cheap a basis as this, but ordinarily the cost to an old-established corporation with assured earning power did not exceed  $2\frac{1}{2}$  per cent of the amount actually paid by the public purchasers in the period before the Great War. Since 1915, however, the bankers' commissions, or their margin of profit, have grown steadily larger. With the increasing difficulty experienced in placing securities, as a result of the worldwide scarcity of capital, bankers possessing an assured distributing capacity have been in a strategic position as compared with corporations facing the necessity of selling bonds. While the highest grade bonds issued by corporations with very high credit were sought after by bankers to a limited extent, the commissions they demanded were often larger than what they obtained for the sale of medium and low-grade bonds before the war.

In some too frequent cases the corporation has had its hands tied by the influence on the board of directors of some prominent banking house which secures the new issue under conditions which prohibit competitive bidding. Without for the moment underestimating the value to any corporation of the constant assistance and advice, not to speak of the financial support, of prominent bankers, it is necessary to acknowledge that no man may act as buyer for himself and seller for the stockholders, for whom, as director, he is trustee. It may be true that the banker is indirectly paid for innumerable services not specifically accounted for by the low price at which he is able to buy the bonds. But he is truer to the principles of his trusteeship if he insists on paying the full competitive price for the bonds, and then requires of the corporation specific payment for specific services rendered.

## CHAPTER XXIII

### NEW CAPITAL FROM SALES OF STOCK— PARTICULARLY TO STOCKHOLDERS

**Offerings of Preferred Stock by Bankers.**—Prior to the Great War it was the common custom for successful expanding corporations to sell bonds to bankers and stock to their own stockholders. But since the beginning of the Great War this sequence has ceased to have much of its old significance. Bankers are now increasingly employed to distribute preferred and common shares for the purpose of financing extensions, and they are forgetting much of their old-time insistence that the securities they distribute to investors shall have the strength and stability of bonds.

The first of the causes of the shift of bankers' purchases from bonds to stocks is the demand of what might be called the "new" investors" for large income return. This class includes men who, because of abnormally high wages or inordinate profits during and following the Great War, had money for investment for the first time. They were ignorant of the distinction between stock and bond, and the legal and economic barriers that separate the partner from the creditor of a business enterprise. They were therefore easily deluded into buying preferred stocks of industrial enterprises because of their greater apparent yield. Then, too, this same argument appeals strongly to the more conservative investors of the community who find that the rising level of commodity prices renders it necessary to obtain a higher net return on their investments. Present necessities color and befog their judgments of the permanent and intrinsic values of securities.

Another and perhaps more important explanation of the

increased offerings by bankers of preferred stocks is the great prosperity of manufacturing establishments since the opening of the Great War, as compared with the railroad, local public utility, and traction industries. Whereas railroads and public utilities frequently issue bonds for the purpose of expansion, industrials rely to a greater extent upon the issue of stock. In consequence, bankers showed no hesitancy in directing the attention of their customers to the advantages of stocks, and the customers fell easily into believing these advantages sound and permanent.

But probably the deepest reason for this change was a change in the attitude of the bankers themselves. Their judgment became befogged by the lure of the long profit. The banker's margin of gross profit on stocks, both preferred and common, has always been higher than that on bonds. In addition to the merchandising profit on the preferred stock, there is usually a surreptitious bonus of common stock.

**Preferred Stocks as Substitutes for Bonds.**—With the growing use of preferred stocks as a substitute for bonds in obtaining capital from the public to pay for extensions, there has been a conscious and studied effort on the part of bankers to give these issues the appearance of bond security. Advantageous as the issue of a preferred stock may be to the expanding corporation, the value of these pretended safeguards must be weighed from the point of view of the investor. Especially is this true since these recent preferred stocks have sought to obliterate the distinction between creditor and partner, seeking to retain certain of the outward characteristics that belong to stocks, while they grasp for the strength and security—the substance, as it were—that goes with bonds. These efforts have proved only partially successful for the simple reason that preferred shares, however named and however hedged in by covenants, cannot be given a priority in case

of the failure of the enterprise. This is the real substance of mortgage bonds, a substance which modern reorganization procedure has somewhat weakened it is true, but a substance which gives the bond the priority not only over the stocks but also over most of the notes and current obligations.

Probably the feature of the recent issues of preferred stocks that is in most striking contrast to the older issues, especially those created at the time of the reorganization or promotion of a corporation, is the provision requiring the gradual retirement of the preferred stock. This is usually called the "sinking fund," from a seeming analogy to the sinking fund provision of bond issues. Such a provision was practically unknown in preferred stock issues down to 1910; it occurred with increasing frequency during the period of the Great War, and has been well-nigh universal among preferred stock issues since the Armistice. Besides constantly decreasing the proportion of preferred stock liability standing against the available assets, such a retirement fund provision stimulates a market for the preferred stock in so far as the company itself is forced to purchase each year some of the stock. This is especially important to the investor in small issues of preferred stock which would have, under ordinary circumstances, a limited and narrow market. The annual retirement fund of these modern preferred stocks is determined by one of three provisions—a percentage of the net earnings, a percentage of the outstanding preferred stock, or a definite par value of stock.

#### **Sale of Common Stock to Stockholders—Requirements.—**

When a corporation wishes to sell common stock, the directors themselves, rather than bankers, will probably try to sell the stock, especially if the corporation has been established a considerable period of time and has a loyal group of stockholders. "Privileged subscription" is the term used to refer to the offer

by a corporation to sell a new security, usually stock, to its stockholders for less than the current market value. It is only by the special inducement of a low price that a corporation can be sure of securing capital from its own stockholders, for the loyalty of the great body of stockholders today to their corporation does not extend to making pecuniary sacrifices; there must be the compulsion of permanent self-interest.

In order that an issue of stock may be successfully sold to stockholders, the corporation must meet at least three essentially different conditions. These conditions, it should be noted, are of the utmost importance, because they define a set of practical tests to determine whether or not, in a given case, a sale of stock to stockholders is likely to be successful.

*Market Value of Old Stock.* Most important of all is the price at which the old stock is selling at the time the new is offered. In order that the stock may be taken by the old stockholders, the market price of the outstanding stock must be well above the price at which the new stock is offered. Ordinarily the new stock is offered at par. Unless, therefore, the market price of the old stock is above par, stockholders will not take the new. On the other hand, if the corporation is very successful and its shares are valued highly by investors it may be sure that an offering to its stockholders will be highly prized, and that the "rights," so-called, which enable the stockholder to buy the stock at less than its customary market value, will command a liberal price on the open market.

*Widely Held Stock.* The second requirement of a successful sale of new stock to stockholders is that the old stock shall be widely held by stockholders. This is much more important than would appear at first sight, for it might be presumed that the size of a man's holdings would have little to do with either his willingness or his capacity to take up his allotted stock, yet the mere fact that the corporation has a very large

number of shareholders increases the possibility of a successful sale, because the failure of a few to buy their proportional shares does not jeopardize the whole subscription. Nor is it correct to assume that the size of a man's holdings is immaterial to his capacity for acquiring new stock. When, therefore, the new stock is offered for subscription, the large stockholders will conclude that the comparatively heavy increase in their holdings of this particular security is contrary to some preconceived plan of distribution. The small stockholder, on the contrary, will seldom be influenced by theories of the proper diversification of his investment holdings but will base his decision as to whether he will subscribe to the stock or sell his rights solely on the availability of sufficient funds.

*Justified Extensions.* The third condition essential to a successful sale of new stock to the old stockholders is that the directors of the corporation shall fully justify the extensions to be made with the new capital. This requires that the directors shall take the stockholders into their confidence with the utmost frankness. There have been exceptions to this simple and wholesome rule. The directors of the New York, New Haven and Hartford Railroad during the period of its notorious overexpansion had only to "ring the bell" (to use a Wall Street phrase), when the stockholders would rush forward with subscriptions to any amount the management might ask for.

An excellent example of frankness on the part of a corporation toward its stockholders is afforded by the circular of the New York Central Railroad Company offering them the privilege of subscribing to its 6 per cent Convertible Debentures of 1935. The whole circular is a model of its kind. After stating in brief the conditions of subscription, the circular states, in part :

The proceeds of the sale of the bonds will be used to fund an equal amount of the company's now unfunded debt which has

been incurred for the betterment and extension of its railroads, and in the acquisition of property.

The convertible bonds will carry an interest charge substantially the same as heretofore paid on notes to be funded.

The more important improvements made on the lines now comprising the New York Central Railroad since January 1, 1910, include:

Further construction at the Grand Central Terminal, at a cost of \$30,000,000 (including commercial buildings), in order to meet the requirements of an increasing passenger business, and to develop the valuable real estate within the terminal area. The annual rentals received from the Grand Central Terminal amount to more than \$2,000,000, which should increase as further improvements are completed and become productive.

Acquisition of important links in the company's main line previously held on lease, \$14,185,000.

Four-tracking between New York and Albany, including improved signaling and new stations, \$15,931,000.

New passenger stations at Rochester and at Utica, including new engine terminals, new yards and appurtenances, \$6,886,000.

Elimination of grade crossings and enlargement of Gardenville yard, \$3,276,000.

Electrification work between New York, Croton and White Plains, \$3,783,000.

Enlargement and improvement of facilities west of Buffalo, \$14,000,000.

Since January 1, 1900, the New York Central and Hudson River Railroad Company, the Lake Shore and Michigan Southern Railway Company and their subsidiaries, now consolidated into the New York Central Railroad Company, increased their resources by \$658,000,000, of which over \$122,000,000 came from the sale of capital stock and over \$114,000,000 from earnings. The remainder came from the sale of bonds, equipment trust certificates, and notes.

**Sale of New Securities to Stockholders.**—If the corporation can meet none of these conditions and yet its directors



believe that their own stockholders afford the best source of new capital, they may authorize a new kind of security, such as a preferred stock or a debenture bond, to be sold among the stockholders. The Detroit Edison Company, for example, alternated at different times during the last ten or fifteen years between a debenture offering to its stockholders and a new stock offering. Owing to the great earning power of the company and its excellent management these privileged subscriptions have been always successful.

**Terms of Privileged Subscriptions.**—If it is decided by the corporation to offer new stock at less than its probable market value, the old stockholders will have the privilege of subscribing to the new stock in proportion to their holdings. This privilege is usually offered under carefully specified conditions. The time, for example, over which the right of subscription extends is very carefully defined, although the period varies considerably. In close corporations, where the privilege is of great value, the directors usually restrict the offering to stockholders of record at the time and allow them only a short time within which to subscribe. In large corporations with widely diversified stockholdings the privilege is often made to apply to the stockholders of record some days after the vote and the period during which the new stock may be acquired extends over some months. Usually the stockholders are allowed to pay for the new stock in instalments and interest is allowed them on all payments preceding the actual delivery of the stock. When there are two classes of stock the practice varies considerably. If the privilege is valuable it is usually confined to the controlling common shareholders; if it is not very valuable and some difficulty is anticipated in securing subscriptions it is invariably extended to both classes of stockholders. Instances exist in which it has been extended to bondholders.

**Theoretical Value of Rights.**—The specific privilege that goes to all the old stockholders to subscribe to the new security is called a “right.” Rights are bought and sold on the stock market in the same manner as shares are bought and sold. Their market price depends on the relative advantage of acquiring the stock of the corporation by subscription over the ordinary purchase in the open market. The market value of a right is determined theoretically with reference to the price of the old shares. If  $r$  represents the number of shares entitled to one new share,  $s$  the subscription price, and  $m$  the market value of the old stock, we may express by the following formula the theoretical value,  $v$ , of a single right:

$$v = \frac{m - s}{r + 1}$$

For example, the American Telephone and Telegraph Company offered new stock at 120 at the ratio of one new share for every five shares already held, and the stock was selling at the time of the announcement at 151½ a share. Then the theoretical value of the right is given directly by the formula:

$$v = \frac{151\frac{1}{2} - 120}{5 + 1} = 5\frac{1}{4}$$

Many people assume that the value of a right is given directly by dividing the difference between the subscription price and the market price by the ratio. This is incorrect, because it should be remembered that the reduced subscription price of the new stock is going to act as a dilution of the value of the premium on the old shares.

**Market Value of Rights.**—The market price of a right is seldom equal to its theoretical value. The assumption that the

two are equal would presume, in the first place, that the subscription to the new stock through the medium of the purchase of rights would represent a cost equivalent to the stock bought on the open market. Yet the purchase of the stock through the rights involves more trouble. Most men therefore would prefer to buy the stock outright on the market rather than through subscription to the new stock, unless the latter method were the cheaper. In order to establish a free market for the rights they would have to be offered at a slight concession under their theoretical value, even though there were no other reasons to depress the value of the rights. But there are other reasons.

There has always been among brokers a feeling that rights sell for most at the beginning of the subscription period, and least at the end. This feeling has amounted to little more than an assumption on the part of the brokers, supported by a few examples culled from their own experience. But when the assumption is tested by the facts available it is found to be true. As a result of an elaborate study of 91 cases of privileged subscription the tabulated results showed that in somewhat over half the cases studied the stocks, and with them the rights, sold for the highest price at the beginning of the subscription period. In one-half of the remaining cases—one-fourth of all—the stocks and rights sold for most at the middle of the period, and in the remaining cases—again one-fourth of all studied—they sold for most at the end of the period.

There are numerous reasons which may account for the fact that both the old stock and the rights sell for most at the beginning of the period. In the first place, the price of both is determined by the law of demand and supply. Clearly, a sudden increase in the supply of the stock, without a corresponding sudden increase in the demand for it, would inevitably depress the price of the stock, and with the price the market quotations for the rights. But this will not react on the market price for some period of time, or until the influence

of the new stock begins to be felt in the increased offerings, so that there will be a short period during which the new stock, although its existence is known, will not be a factor in determining the price of the old. But as the new stock begins to be bought and sold in anticipation of its issue, it will begin to exert a depressing effect on the price of the stock and incidentally on the rights. Another direct reason, more obvious but less potent, that explains the gradual decline in market price of the rights and with them the stock during the subscription period, is the general inertia of the stockholders, which leads them to put off the selling of their rights to the last minute; meanwhile the "odd lots" of rights held by the small investors have been "evened up," so that the regular sale of small lots will have become negligible. Under these circumstances the rights that are offered are bought only by speculators who see a temporary profit in this purchase. Naturally such a class of buyers will acquire them only if the purchase of the rights permits the subscription to the new stock at a price appreciably lower than its general market price.

**Underwriting Privileged Subscriptions.**—The uncertainty surrounding the privileged subscription and the effect which it is likely to have upon the market price of the stock often make it unwise for a corporation to trust implicitly in the success of the sale of stock to stockholders. The corporation requires the money and does not care to have the success of its sale jeopardized by temporary or permanent declines in the market price of its stock. In actual operation a group of outside bankers, or quite commonly the more wealthy of the directors, insure the success of the offering, agreeing to take all the stock not subscribed for by the stockholders themselves. For this service, or rather for taking this risk, the syndicate receives a commission on the entire amount of stock offered, usually about 2 per cent. In case the stockholders take up their

entire allotments the syndicate is required to take no stock, but if any remains unsubscribed the syndicate takes it from the corporation at the price which the stockholders would have paid. The risks of an underwriting syndicate of this character are considerable. The tastes of stockholders are fickle and the investment market uncertain. But a group of bankers is in a much better position to carry these risks than the corporation itself. In 1903 the Pennsylvania Railroad, then in the midst of enormous expenditures on its New York terminals—expenditures which many regarded as of doubtful expediency—offered its stockholders new stock for \$60 a share, the market price at the time being about \$72. The amount to be subscribed was \$90,000,000, an amount which it was assumed would be absorbed easily by the old stockholders. But the stock was not to be subscribed for until some months after the announcement of the subscription. Meanwhile financial conditions became unsettled, stock market prices of all securities declined, and, in particular, doubt was cast on the wisdom of the Pennsylvania Railroad's heavy terminal expenditures. As a result of all these circumstances the price of the stock declined to a little less than \$60 a share. If it had remained below \$60 the sale to the stockholders would have proved a failure, because the stock could be more cheaply bought in the open market. Finally a syndicate was formed which for a commission of  $2\frac{1}{2}$  per cent guaranteed to the railroad the success of the sale. Immediately after the formation of the syndicate was announced, the price of the stock advanced and ultimately most of the new stock was taken by the stockholders. The mere fact that corporations of the magnitude and strength of the Pennsylvania Railroad have found it necessary to employ underwriting syndicates of independent bankers to insure a successful sale of stock to their stockholders shows how difficult and, on the whole precarious, is this method of obtaining money for expansion.

## CHAPTER XXIV

### CORPORATE FAILURE

**The Importance of Reorganization.**—The failure of a corporation is distinctly different from that of a partnership. In the latter case the business would ordinarily have no bonded debt, and the bank and merchandise creditors would either force the business to liquidate, or else compel the partners to offer some plan involving the partial or complete payment of the debts. The case of the small corporation is similar. In the case of a large corporation, on the other hand, there are many different persons interested in the business. It is a complex organization. No one is personally liable for the debts in case, on liquidation, the business does not sell for the amount of its liabilities. Furthermore, the large business has usually valuable intangible assets, such as good-will, which retain a value only if the business is continued. So that even when it appears that the business may be disintegrated and the parts sold for an amount sufficient to meet the creditors' claims, the stockholders themselves will probably deem it expedient to invest sufficient new money to pay these claims immediately and thus save the business and its organization from complete disruption. In this way a new or reorganized business, free from immediate embarrassment, starts with the same stockholders as the old.

If the corporation furnishes a public service it cannot be closed up, even if the various parties concerned are willing. The courts take the attitude that a railroad, or an electric light or gas plant, supplies a public necessity and that the rights of the public come before the wishes of the stockholders or even the debts of the creditors. Except in extreme cases when there is

abundant evidence to show that there exists no public need, the courts will insist that the embarrassed corporation shall operate its trains or its lighting plant through the agency of a receiver, and that its stockholders and creditors shall ultimately adjust their difficulties and reorganize the corporation so that it may continue its business as a solvent and progressive enterprise. The court may even issue securities in the name of its receiver which take precedence over the claims of every creditor of the corporation; it may decide which creditors' claims shall be paid and which shall not; and it may otherwise conduct the business in an arbitrary manner, provided such usurpation of power is necessary to safeguard the interests of the public. From all these causes the probability is very slight that an unprofitable or bankrupt business, meeting an obvious need of the public, will be disintegrated and the parts sold; it will be voluntarily or forcibly reorganized.

### **Distinction Between Fundamental and Superficial Causes.**

—In discussing the causes of corporate failure it is convenient to distinguish between three phases of the general subject—the fundamental causes of failure, the superficial causes or conditions, and the outward signs. These three are usually confused, even by economists. We may go even further and say that ordinarily neither the men who are responsible for the business failure nor the financial experts who constitute themselves an investigating committee, ever note the difference between the fundamental and abiding causes of financial distress and the mere external symptoms that stand out clearly in the foreground. Business men are usually unreflective. In a very true sense that makes them aggressive and quick of response, because action is not imperiled by irresolution. It does not, however, make them successful in diagnosing their own troubles or those of their associates. They cannot see the causes of business failure in their true

perspective. After the most exhaustive and illuminating analysis of economic causes of business failure, there must stand out always the fact that a business fails because the managers do not possess the necessary intuitive skill, foresight, initiative, perseverance, and intellectual power to compel its success. Any discussion of economic advantages or disadvantages must be subordinate to the conscious recognition of personal characteristics. Yet recognizing fully these psychological conditions leading to failure, one may still speak of fundamental economic causes, in the sense of economic conditions which will, under the leadership of any but a business genius, lead to failure. In this category may be included four—excessive competition, unprofitable expansion, a change in the public demand for the commodity, and the distribution of capital as ostensive profit.

**Fundamental Economic Causes—I. Competition.**—Competition is a necessary and wholesome element in all business enterprise. Within broad limits, the keener the competition the greater will be the business efficiency and the higher the range of executive ability required for success. It becomes a true cause of failure only when it becomes so keen that the most efficient competitors are required to sell at less than cost. In the case of a business requiring small capital, a business which can be created or liquidated in a short time, the most efficient will never be compelled to sell for less than cost. Instead, the less able managers of the less efficient plants will wisely stop producing or even retire from business. But if large amounts of capital are invested, or if the service is required by the public, or if the business carries itself forward by the sheer momentum of its past, it can neither stop producing nor go into liquidation. A railroad is a case in point. It cannot cease to exist. If the rates it collects for its services are insufficient to pay for its operation, it must still run its trains. A local



public service company is ordinarily protected by the utility commission of the state in the exercise of monopoly powers, provided it renders good and reasonably cheap service to its customers. Competition is a relatively unimportant factor for such businesses, unless one considers the competitive influence of two utilities—gas and electricity, omnibuses and street-cars. In manufacturing businesses the plea of severity of competition can be advanced but seldom as a fundamental cause of failure. A manufacturing business can curtail production even at the expense of its organization rather than dispose of its product at less than cost. It is true competition is alleged to be the true cause of many failures, but the allegation is merely an excuse to obscure the deeper defect in business management. Too keen competition is invariably the excuse of the weak.

**2. Unprofitable Expansion.**—Unprofitable expansion is a much more serious and a much more common cause of failure than drastic competition. It is the besetting sin of a fairly successful corporation with a relatively large margin of gross profit based on a small output. It is also the usual cause of disaster among corporations favored with an unusual capacity for borrowing money. While overmastering competition occurs only when there is a large capital investment, the temptation to overexpand is present in every business. It is commonest in a country like the United States where the margin of profit shows marked fluctuations and where the temperamental bias of optimism is magnified by an inclination to regard hopes for the future as things predestined. As a keen judge of business conditions remarked to some students, "When you have a business that is growing very rapidly, you are apt to be a little blinded by the rapidity of it, and look at your gross sales rather than your net profits."

The number of instances in which the cause of failure

is overexpansion are legion, but for the present purpose it suffices to note three, drawn from the manufacturing, the public service, and the railroad industries.

*Overexpansion of a Manufacturing Industry.* One of the striking instances of failure due to overexpansion of an otherwise successful manufacturing business is afforded by the history of the Westinghouse Electric and Manufacturing Company. Starting in 1886 with sales amounting to less than \$150,000, the business grew by leaps and bounds. During the year 1894, a period showing relatively little business activity, the Westinghouse Company, on a capital including bonds and current debts of less than \$10,000,000, showed a net profit of over 16 per cent. Expansion continued. The company organized foreign departments and finally foreign factories. It financed interurban electric railway lines for the purpose of exploiting its inventions; it advanced large sums to unproductive subsidiary companies. By 1906 its total funded and current liabilities and stock had risen to \$45,000,000 but the net profit was only a little over \$3,000,000, or only 5 per cent. No theoretical economist ever discovered a clearer illustration of the law of diminishing returns. As a small business in a year of depression, the Westinghouse Company earned 16 cents on every dollar of invested capital; as a large business in a year of marked prosperity, it earned 5 cents on each dollar. It failed the year following.

*Overexpansion of a Public Service Holding Company.* The second type of illustration comes from the field of the holding company, or more particularly the public service holding company. As explained in another connection, this type of enterprise became very popular in the years following the panic of 1907, when capital was seeking new channels of investment. The first two or three of these companies were successful from the beginning, notably the original United Gas Improvement Company, and later the American Light and

Traction and the American Gas and Electric companies. In finance, as in all other fields of endeavor, there are always hosts of imitators whenever a new development seems to point the way to an easy success. Public service holding companies sprang up all over the country. As their profits consisted entirely in the increment of earnings remaining to generous issues of common stock of the local operating companies, it seemed to the operators of these companies that the greater the number of utilities controlled the greater must be the profit. The success of the American Light and Traction Company was due to the careful selection of properties to be acquired, conservative management, and shrewd finance. Its imitators, however, lacked these three elements of success—they lacked particularly care in selecting new properties. Economy was sacrificed to mere size. This foolhardy mania for expansion reached its climax toward the end of 1911 just before the decline of the stock market values which ended in the close of the Stock Exchange, July 30, 1914. Subjected to a shrinking market for credit, these recently organized holding companies were in dire straits. Most of them resorted to the issue of short-time notes, either to meet the demands of their subsidiaries, or to fulfil already existing contracts. Some of them used borrowed money to maintain the interest on their bonds. Several went into the hands of receivers. Others passed their preferred stock dividends or gave scrip for them. They all advanced excuses—a tight money market, increased taxes and labor costs of the operating companies, and latterly a difficulty in selling securities because of the Great War. But the fundamental reason was not given. The companies had spread their resources and their credits so thin that the cover had begun to break.

*Overexpansion of Railroads.* In the field of railroad enterprise the influence of unwise expansion was much more potent than that of keen competition even during the decade before

the panic of 1893, although excessive competition has been advanced as the primary cause of the numerous receiverships of that time. When the Northern Pacific passed into the hands of receivers the road was facing an annual loss of over \$1,500,000, caused very largely by its unprofitable branch extensions. The Atchison in its foolish expansion from 1884 to 1888 illustrates the principle clearly. In the former year with 2,800 miles of line the road made net earnings of \$2,600 a mile; in the latter year with 7,000 miles of line it earned only \$700 a mile. In the former year the road had over \$5,000,000 available for its stockholders; in the latter year there was a net deficit of \$3,000,000. Looking at the matter another way, the Atchison system earned  $6\frac{1}{2}$  per cent on its total outstanding bonds and stock in 1884, and  $2\frac{1}{2}$  per cent in 1888.

Among eastern roads the failure of the Reading in 1880 was due directly to the purchase, at a cost of \$73,000,000, of coal lands valued at the time at \$30,000,000, and the receivership of 1884 to the lease of the Central Railroad of New Jersey which guaranteed a dividend of 6 per cent on its stock when the interest on its bonds was not earned. The Reading's failure of 1893 can be traced to the burdens of the Central New Jersey and Lehigh Valley leases, together with wild speculations in the stocks of New England railroads. So that each of the three failures of the Reading can be attributed, unhesitatingly and without a suspicion of doubt, to unprofitable expansions.

The most conspicuous railway failure of the last few years due to unprofitable expansion is that of the New Haven system. Brushing aside for the moment all the secondary causes that led to one of the most unfortunate and unnecessary failures of railroads, the primary fact stands out that the New Haven Railroad itself was ruined by the insane craze of its bankers and directors so to extend its sphere of control as to embrace a monopolistic system of transportation covering all

of New England. Sustained by the hope of ultimately securing monopoly profits and thereby justifying the outlay, stimulated by the surreptitious profits obtained by its directors and by the ease with which it received credit from New England investors, the road plunged headlong into a series of expenditures which embraced traction companies, steamship lines, connecting railroads, even gas, light, and water companies, until the legitimate profits from the railroad were more than offset by the losses on the outside enterprises. Thus in 1899, on a total capitalization of \$80,000,000, including bonds and stocks, the company earned, above operating expenses and taxes, almost exactly \$10,000,000, or approximately 12 per cent on the capitalization. This was before any outside operations were undertaken. In 1914, after the completion of the policy of expansion, the total outstanding capitalization had increased to \$417,000,000, while the railroad mileage stood at exactly the same figure. The net income available for interest and dividends on capital had increased to \$21,500,000, but that was only 5 per cent on the outstanding stock and debt—less than half what it was before the period of outside speculations. In brief, during the fifteen years between 1899 and 1914 the railroad mileage of the New Haven system was not increased. Yet during the period invested capital became five times as great and the earnings only twice as great.

All these failures due to unwarranted extensions illustrate the economic law of diminishing returns. This is more than a mere academic doctrine of scholastic economists. It is a vital force operating in actual business. If a certain investment, say of \$1,000,000 in a manufacturing plant or a railroad, yields a net profit of 10 per cent, it does not follow that an investment twice as great will yield twice as great a profit. On the contrary, wastes incident to the bigger business will creep in, so that the profit, although perhaps greater in actual amount, will be smaller proportionately. And if the investment be con-

tinued without limit the decline in actual earnings with the later investments will even obliterate the profit on the earlier investments. In brief, after a certain point, as capital is added to any industry, the rate of return on each dollar invested grows smaller. It is true that up to a certain point, the point of saturation, as it were, the profit tends to increase. But this point is early reached. The optimism of business men, the avarice of bankers, and the enthusiasm of engineers easily carry the business beyond it.

**3. Cessation of Public Demand.**—A third deep-lying economic cause of failure is the change in the conditions of public demand. Such a case, however, is relatively rare. The failure of the old American Bicycle Company is a case in point. This combination acquired in 1898 some 48 bicycle plants producing upwards of 65 per cent of the bicycles made in the United States. According to reliable auditors the annual profits of these plants had together averaged nearly \$5,000,000 for the preceding four years. Appraisal by reliable independent experts showed actual property to the value of over \$22,000,000, of which upwards of \$12,000,000 consisted of net quick assets. All this augured well for the combination. The total number of bicycles sold fell from 860,000 in 1899 to 100,000 in 1902. Suddenly, with no warning, the public ceased to use its toy. As a result the millions of dollars of property set aside for the manufacture of bicycles became useless and the company failed. Even after \$2,500,000 in new money was added to adapt the factories for the manufacture of automobiles, it was no more successful. The reorganized company failed twice thereafter.

**4. Excess Payment of Capital Charges.**—The fourth of the group of fundamental economic causes of failure is entirely financial. It is the payment of excessive interests or dividends due to a mistaken belief in the profitableness of the enterprise.

Such payments may often be excused on the ground of unconservative but technically correct principles of accountancy—principles which, for example, may be theoretically defensible but are unquestionably unjustifiable in practice. The corporation which employs them becomes insolvent whatever the textbooks of accountancy may say. At other times the payment of interest or dividends in excess of profits cannot be justified by any theory and can be called nothing short of fraud. Thus the American Malting Company, in a notable case that came before the courts, paid out nearly \$900,000 in dividends, while its gross profit, without allowing for depreciation or special reserves, amounted to \$500,000. In 1872 the old Erie Railway was rescued by Daniel E. Sickles from the notorious Drew-Fisk clique. In the three following years the road earned a profit of \$1,008,775, but its directors represented the profit to be \$5,352,573, on the basis of which dividends were paid on the preferred and common stocks. Meanwhile, \$6,000,000 of bonds were sold. From 1888 to 1895, or in seven years before its failure, the Baltimore and Ohio paid out \$6,269,008 in dividends, whereas an independent auditor found that less than \$1,000,000 had been actually earned. In 1887 the directors of the Atchison road increased the dividend rate from 6 to 7 per cent at a time when the net earnings of the road were actually falling short, by over \$2,000,000, of the interest and rental requirements. And this situation is present in the contemporary railroad troubles. Although the failure of the St. Louis and San Francisco Railroad in 1913 was due primarily to unprofitable extensions, it was aggravated in no small measure by the payment of excessive charges on the securities of the Chicago and Eastern Illinois. The weakness of the Toledo, St. Louis and Western Railroad, which passed into the hands of receivers in October, 1914, was due to the excessive capital charges resulting from the burdensome charges of the Chicago and Alton Railroad.

It is important to observe also that although the occasion for the payment of unearned dividends and interest may be traced back to overexpansion, and for that reason overexpansion is to be regarded as the fundamental cause of distress, still the payment of unearned capital charges has in many cases directly precipitated failure.

This is particularly true of railroad systems constructed out of numerous component parts, and of industrial combinations promoted in the expectation of receiving monopoly profits. Thus, of 24 cases of industrial failure examined in another connection, it was found that "18 out of the 24 paid either unearned interest on bonds or unearned dividends on stock in the year just prior to the failure or reorganization," and that "every corporation paid out interest or dividends in the face of falling earnings and none need have suffered serious financial difficulties had the amounts paid in interest and dividends been conserved."

While it is entirely possible and safe to draw on a large surplus in order to maintain interest or dividend payments for a single year or even two years of reduced business, the policy is at best questionable. No doubt the New Haven Railroad's plight was aggravated by the fact that in the four years from 1910 to 1915 the dividend payments every year exceeded the profits available. No sufficient excuse for the mistake can be found in the desire to protect the small investor or in the hope of maintaining the company's credit among savings banks. This entire matter has been discussed in its proper place before, but it is important to note again that the continued payment of interest or dividends in excess of earnings can have only one outcome, however successful the policy may appear to be for a short period.



## CHAPTER XXV

### REORGANIZATION METHODS

**Contraction of Financial Plan.**—When a corporation fails or becomes embarrassed its financial plan is usually remolded. This is reorganization. It is a redrawing of the financial plan, but with a view to contraction, not to expansion. Whether the new plan provides for contraction or expansion, new money is required, but an expanding and profitable business may ordinarily solicit new capital on the basis of its past success, whereas a bankrupt business secures capital only through coercion. Unwillingly its security-holders add more money merely to save that already invested. So easy is it to obtain money for the expansion of a successful business by one of several ways that the question is merely one of financial expediency; so difficult is it, on the other hand, to obtain the money necessary to reorganize an unsuccessful corporation that the success of the reorganization depends primarily on selecting that plan which shall achieve this one end with the least friction.

**Factors Involved.**—Owing to the delicacy of the situation and the judgment required, corporate reorganization is the most intricate phase of the whole field of finance and the one in which generalizations and precedents are least significant. It is a subject which has as its elements a mass of conflicting legal precedents, the makeshifts of mere temporary expedients, and, permeating the whole, the psychological bias and prejudices of thousands of dissatisfied human beings whose interests are in fundamental conflict. The primary purpose of every reorganization is justice to all concerned. But the justice is tempered—one might almost say obscured—by motives of

expediency. Compulsion is exerted at one or more points. This requires the arm of the law. Moreover, even when the statutory law presents no difficulties, there are always conflicting precedents and legal opinions. In addition to the legal aids and impediments there are important financial questions of mere judgment—the ease with which an underwriting may be obtained, to what extent the stockholders may be counted on to add money, what may be the opportunity for selling bonds during the first year of the new company's life. In answering these questions in any one particular case precedents are of little value. Each reorganization is different from all that have occurred before in one or more important respects.

**Importance of Study of Reorganization.**—Yet in spite of its intricacy, a study of the reorganization of corporations is one of the most important in the field of finance. In the past, hundreds of millions of dollars of actual property investment have been involved in reorganizations. Great railroad systems like those of the Atchison and the Reading, great traction systems like those of the New York City and the Chicago surface lines, great manufacturing industries like that of the Westinghouse Company, involving thousands of laborers and the production of necessities of modern civilization, have all been subjected to the uncertainties of reorganization. These enterprises have involved much more than the mere fortunes of the wealthy; they have been concerned with the savings of a great multitude of people, including the very poor. Frequently the savings of a man's lifetime have been jeopardized by a single man's interpretation of justice in a reorganization plan. Probably the ablest men in law, finance, and productive industry have given some of their best efforts to the solution of the intricate problems involved. The regrettable feature is that in spite of all precedents each new reorganization is quite as perplexing as those that have gone before. Only the

most vague and inexact theories and generalizations can be made.

**Reorganization of a Large Corporation.**—A large business is not ordinarily closed, its property sold, and the proceeds divided up among the creditors. It is reorganized. Sometimes this is done publicly, with all the dislocation and notoriety that usually attends business misfortune; sometimes it is done quietly through conferences and concerted action by all the persons concerned. The former is a reorganization through a court receivership and the latter a reorganization through a friendly committee. The former method was and still is pursued in case of the failure or expected failure of a large corporation with many security-holders and creditors of diverse interests. Under these circumstances close co-operation is impossible and the whole readjustment must occur under the supervision of the court. ✕

The procedure followed at the present time in effecting the reorganization of a large business corporation has developed through a series of precedents, each one of which was established originally more through accident than forethought. Ordinarily a fundamentally important mode of procedure, in financial as well as other social affairs, results from a slow and tempered growth of precedents, all of which are firmly rooted in the common or the statutory law, and all of which are constantly balanced off against contemporary social opinion. The history of the organization of the business corporation, the history of the public franchise, the history of the practice of corporate taxation, are all illustrations of the orderly and well-regulated development of a body of well-considered precedents, consistent at all times with the law and with public opinion. Not so the present practices governing the reorganization of financially embarrassed corporations. They have arisen through immediate necessities; they have come into existence at times

when any action, legal or illegal, impetuous or reflective, was better than no action.

- Motives Governing Procedure.**—Three separate and often antagonistic sets of motives govern the procedure to be followed in the reorganization of any kind of large corporation.
1. The most important and usually the least apparent is concerned with the human or psychological elements. Most writers on finance, taking their promptings from published circulars and reports, forget the interplay of human motives, ambitions, antagonisms, and friendships that underlie every financial episode of importance. A corporation is reorganized by men, not puppets; its officers, its creditors, its security-holders, the attorneys, and the judges, are not mere thinking machines, but ordinary men subject to human emotions and weaknesses. First then, the procedure must be such as to allay, not aggravate, the friction incident to the conflict of personalities. The second set of motives governing reorganization procedure is
  2. economic. Leases must be continued or abrogated, contracts rewritten, rights enforced or surrendered, in accordance with the single question—Is it profitable? No corporation can be permanently successful and serve the public well which does not pay its operating expenses, including fair wages to its employees, with adequate upkeep of its plant, and in addition a fair rate of return on the invested capital. And the reorganization procedure must recognize this simple economic imperative. The third set of controlling motives is legal and judicial.
  3. Experienced students of legal practice have worked out certain more or less clearly defined lines of orderly procedure. Some of these lines of procedure have been prescribed by the courts, others are merely tolerated by the courts because they facilitate the regular course of the reorganization, and others, arising from the ingenuity of lawyers, are followed until some court decision condemns them. Lawyers are apt to exaggerate their

own importance and the significance of their legal machinery in determining the form and details of reorganization procedure, forgetful that a reorganization is primarily an adjustment of human motives and economic conditions, circumscribed rather than determined by the law. The present orderly, and on the whole socially expedient, procedure in connection with the reorganization of all corporations large and small, has been built up from the interplay of these three underlying motives.

**Events Immediately Preceding Failure.**—The explicit failure of an industrial company may come suddenly, as the immediate consequence of a labor strike, a panic, or a bank failure, or even the death of an important director. A railroad failure, or the failure of a local utility, invariably due to deep-seated, slow-acting causes, may often be postponed or quickened at the discretion of those in immediate control. At all events, when the financial and operating conditions of the corporation reach such a pass that a crisis seems inevitable to the management, it takes one or both of the two steps—the organization of protective committees, and the petition for the appointment of a receiver. Sometimes committees close to the management are formed before failure has reached a critical stage, one of the avowed purposes being to prevent or forestall receivership proceedings; and sometimes receivership proceedings are brought suddenly, and almost at the last moment, before the management has an opportunity to organize a “stockholders’ committee.” Thus no general rule can be laid down covering the order of these two events, but the public acknowledgment of financial failure is indicated if one or the other or both of them occur.

**Formation of Committees.**—The organization of protective committees is more important than the receivership proceed-

ings, the latter being a legal formality now dispensed with when the corporation is small, the parties concerned few, and the fundamental difficulty easily ascertained and remedied. The committees arise from two different sources. There is, first, the stockholders' committee, usually dominated by the old directors of the corporation. This committee acts on the defensive; throughout the whole course of the reorganization proceedings the stockholders' committee is engaged in explaining and justifying the past management and haggling with the other committees in regard to the extent of the sacrifices which the old stockholders must undergo in order to regain the control of the corporation. The other types of committees are representative of different classes of creditors. In the reorganization of a small industrial corporation there is, in addition to the stockholders' committee, only one committee of creditors. In intricate industrial reorganizations there may be separate committees representing the merchandise creditors, the bank creditors, and the public holders of the notes and debentures. In intricate railway reorganizations there may be committees of junior bondholders, of senior bondholders, of branch and divisional line bondholders, and of the bondholders of subsidiary lines or terminal properties controlled through leases or operating contracts. The committees of the holders of the floating debt are usually formed and dominated by the large bank creditors. The committees of bondholders are formed and dominated by the investment banking houses which were responsible for the original sale of the bonds to the public; if the bonds were distributed long ago, prominent trust companies or life insurance companies may assume the guiding hand.

as in  
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Milwaukee.

The committee or committees representing the floating debt, the junior bonds, the notes and debentures, will stand antagonistic to the committee of stockholders. The committees of senior bondholders will assume throughout an attitude

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of watchful waiting. In the majority of cases, especially if the property is a railroad and the lines covered by these liens are strategically important for the unity of the railway system, these committees will be called upon to take little part in the reorganization. If, as is the case in comprehensive railroad reorganizations, they are required to fund their bonds under new first and general mortgages, they will be able to prescribe the conditions which the junior bondholders and stockholders must accept. It facilitates matters very much if the important committees agree among themselves upon the formation of a general reorganization committee upon which representatives of the different committees serve.

**Classifications According to Legal Procedure.**—The character and the significance of the legal aspects of a reorganization depend very largely on whether or not a receiver is appointed to administer the business during the period between the financial crisis and the final consummation of the reorganization. This in its turn depends on whether or not there is likely to be acrimonious and prolonged dispute among the various security-holders, and whether or not a recalcitrant group of security-holders is likely to try to impede or even frustrate an amicable settlement of conflicting interests. If the failure is very serious, thus entailing large losses to all concerned, or if it involves a large railway embodying many conflicting interests, or if there are burdensome leases and contracts which must be abrogated at all hazards, then receivership proceedings are necessary.

A drastic but fair reorganization can be carried through in an autocratic manner if a receivership is resorted to, because in the end, by a judicial sale of the bankrupt corporation's property, the court can force a recalcitrant minority to accept what it considers a just reorganization plan or extinguish the interests of the minority. But if the reorgani-

zation is that of a small industrial corporation, the opposing parties of which are two or more closely knit factions who are able to compose their differences, or if the crisis is merely temporary so that little permanent sacrifice is required of anybody, then the various security-holders can probably arrange a plan of reorganization among themselves without resort to the machinery of the courts. A reorganization consummated without compulsory pressure exerted by the courts through judicial sale, even though a receiver be appointed at some stage in the proceedings, is called "voluntary," one consummated through the coercive authority of the courts, represented by a judicial sale of the property of the old corporation and the reorganization of a new corporation, is called "involuntary." The vast majority of railroad organizations are involuntary and follow a court receivership, although from time to time voluntary reorganizations have been attempted for large railway systems, and sometimes they have been successfully consummated. There have been many voluntary reorganizations of large and small industrial and local public utility corporations.

The paramount advantage of a voluntary reorganization is that it preserves valuable rights. The whole reorganization can be carried out with little outward formality and without harming the general credit of the corporation or any goodwill values belonging to its trade-marks or franchises. The objections to such a reorganization lie entirely in the difficulty of its execution and in the large amount of securities which must be issued in order to please everybody concerned. In several large and important reorganizations of this kind it has been found expedient to carry on parts of the reorganization under the protection of the court. The number of these voluntary reorganizations, aside from minor capital readjustments, has been relatively small. And in all respects, except in certain details of legal procedure, voluntary reorganiza-



tions are similar to those consummated through foreclosure sale.

**Appointment of a Receiver.**—In the vast majority of cases, the first step in the legal procedure of the reorganization is the appointment of a receiver by a court of equity. Brushing aside exceptional conditions, the usual practice in the consent receiverships may be very briefly stated. The necessity or desirability of a receivership having been agreed upon by the directors (usually in a secret meeting), some friendly general creditor with a claim in excess of \$3,000, not residing in the same state as that in which the corporation has its main office, is asked to allow his name to be used in the receivership proceedings. Accordingly the attorneys for the corporation prepare the necessary bill of complaint to which the creditor complacently signs his name. The attorneys at the same time prepare the corporation's answer, which admits the allegations of the creditor's bill and prays for the appointment of a receiver. The court grants the prayer and appoints one or more receivers. Subsequently, the trustee of the general junior mortgage brings a foreclosure bill in the court of primary jurisdiction and the same receivers are appointed as under the creditor's bill. At least one receiver is one of the old officials of the corporation, familiar with routine administration, whose name is suggested to the court at the time. The other receiver is a lawyer or publicist in whom the court has explicit confidence.

As soon as the receiver of a corporation has been appointed he assumes the management of the business. Ordinarily, especially with large corporations, such as railroads and traction companies, the receiver makes very few changes in the personnel of his organization, although he may alter entirely the general policy of the corporation in many important contracts. For permission to enter into or cancel important

contracts, a receiver will usually seek the consent of the court; he must also obtain permission of the court in order to issue receiver's certificates and to expend large sums for the improvement of the property. But in all details of actual management the receiver is free to follow his own judgment.

**Investigations Succeeding Receivership.**—During this period, while the receiver is in actual control of the property of the corporation, the various committees are at work seeking to find a substantial basis upon which to establish their plan of reorganization. This requires a knowledge of at least three sets of facts.

First, they must ascertain by competent auditors whether or not the published reports of the corporation in the years preceding the failure were approximately true. The audit must not only verify the technical correctness of the books, but it must also determine whether or not the depreciation accounts were adequate, and if they were not—as was probably the case—the extent of the deficiency. The auditors must also ascertain whether or not all the equipment—machinery, merchandise, or rolling stock—claimed to be in fit “usable” condition, is actually in use or in fit condition; they must check all the rentals, insurance policies, and intercompany contracts to be sure that the old managers have protected the company's contractual rights.

The second set of facts is supplied by attorneys, acting for the reorganization committee. They have to do with countless legal matters resulting from the general tangle: what contracts may be safely abrogated and what contracts must be fulfilled even at temporary losses, the amounts required to settle with parties holding contingent claims in order to forestall troublesome delays, the probable outcome of pending suits, and the approximate expenses of the receivership and reorganization.

A third set of facts the reorganization committees must supply themselves, and since there are among their number distinguished bankers, they require no independent expert advice. These facts cover the general probability for the successful negotiation and sale of the securities of the reorganized road. The committees must assess accurately the probable effect of their reorganization plan on the market values of old and new securities; they must determine the limit of sacrifice stockholders will make without surrendering their interests, the relative marketability of long- and short-term bonds, the expenses and fees of underwriters, and similar financial matters.

**Formation of the Reorganization Plans.**—From the results of these investigations the general committee works out a single reorganization plan which is based on the most accurate and comprehensive knowledge available. No definite plan is now advanced in haste. But this orderly procedure has developed, however, only within the last twenty years. Formerly plans were propounded by one committee after another, beginning almost as soon as the rumors of the impending disaster were heard. In contrast to the reorganizations before 1900, it may therefore be said that the contemporary practice is to lengthen the period of preliminary investigation and adjustment, during which time no reorganization plan is published, and, so far as possible, to shorten the period of public discussion over the plan through a preliminary agreement on the part of all the influential interests to support the final plan as soon as it is published. Practically all the recent reorganizations of large corporations have run along smoothly in an orderly manner, to outward appearances. The Chicago, Rock Island and Pacific, the St. Louis and San Francisco, the Pere Marquette—all of them reorganizations of railroads involving a multitude of conflicting interests—were consum-

mated without apparent external friction, once a definite and final plan had been agreed to secretly by the various committees which represented the important securities.

The most difficult and important step in the reorganization procedure is to secure a complete outward harmony of all important interests, so that all may work for the success of a common plan. All, except perhaps the senior bondholders, must make some sacrifices. But the determining power lies usually with the committee representing those securities—usually the junior mortgage bonds or debentures—of which some sacrifice is required, but which is nevertheless in a relatively secure position as compared with the holders of the floating debt and the stocks. In other words, the determination of the plan is likely to be left to the factions which must make sacrifices. Of these, the party making the least sacrifice will probably have the deciding voice.

7 Out of the conflict of opinions and interests, a plan of reorganization is finally evolved which has the acknowledged support of all the committees representing the conflicting interests. This plan is published before the receiver surrenders the property, or even before the foreclosure sale. It is published with the recommendation of all the committees that it be accepted by the various groups of security-holders. The latter are asked to become parties to the "reorganization agreement," which is the formal legal document that invariably accompanies "the plan." By so doing, they assent to the terms of the reorganization and on paying their assessment, if any is called for, receive their allotted securities in the new corporation. Those who do not care to accept the terms of the reorganization are allowed to withdraw the securities originally deposited, usually on the payment of a small fee to cover expenses of the committee. If, as is probably the case, a very large proportion of the security-holders consent to the conditions, the reorganization committee declares the

plan operative, and the reorganization is finished except for the legal formalities.

**Execution of the Plan.**—To carry out the obvious will of the great majority of assenting claimants and security-holders, the reorganization must be forced through and the dissenting minority and obstructionists settled with in a just and open manner fully approved by the court. This is accomplished by the judicial sale of the old corporation's property through a decree of foreclosure, by which the court preserves the outward form of a foreclosure sale. Owing to the fact that the foreclosure of the property of a great corporation requires far more capital than a single man or group of men can command, the court recognizes that there will be no competition at the foreclosure sale of the property. In order to prevent the various parties who have agreed among themselves upon a workable plan of reorganization from conspiring together to purchase the property for little and thus defeat the just claims of other creditors who have not pooled their interests, the court ordinarily fixes a minimum or "upset" price. It is the amount which the receivers must realize from the property in order that the court shall confirm the sale. It amounts, practically, to the determination by the court of the price at which the reorganization committee may acquire the property of the old corporation at a public sale, and also of the conditions under which the committee must settle with the creditors who have not consented to its plan. There is, theoretically at least, a chance that other persons may care to pay more for the property than the reorganization committee, and the general creditors not embraced in the committee's plan should be given—theoretically at least—an opportunity to bid in the property in satisfaction of their own liens.

The reorganization committee, having acquired the property, immediately turns it over to the new corporation. This

the committee has caused to be formed even before the final settlement. The same name is retained in the case of reorganization of a public service corporation, except that "railroad" may be changed to "railway" or "company" to "corporation." But in the case of industrials the name of the new corporation is almost invariably made different from the old one.

**Adjustment of Opposing Interests.**—The most difficult problem remaining to the reorganization committee after the sale is that of the final adjustment of conflicting interests. The questions connected with this problem have been affecting all the tentative plans and later stages of the work of the various reorganization committees. They represent the loose ends and possible sources of embarrassment and litigation that invariably cast their shadows about every reorganization of importance. In case all the bonds are of one class, are all deposited with the reorganization committee, and no other creditors exist, the transition from control by the receivers to that of the new corporation occurs without a possibility of friction. But such simplicity is seldom if ever present in any reorganization of considerable size. There are always claims to be adjusted. If the upset price exceeds the face value of one or more issues of underlying bonds, these bonds are not affected; in the vocabulary of finance they are "undisturbed." If the upset price does not equal the face value of a bond issue, some adjustment is necessary with those of the bondholders who have not consented to enter the reorganization and they are invariably paid off in money raised by the reorganization committee as part of their plan. The amount each non-assenting bondholder receives is the proportional part the face value of his bond bears to the sum received by the court from the sale of the actual property securing them. Unless the bonds are secured by very valuable physical property the amount given the non-assenting bondholders is small

## CHAPTER XXVI

### RAILROAD REORGANIZATIONS

**Overexpansion as a Cause of Failure.**—Great emphasis has been laid already on the frequency of overexpansion as a cause of corporate failure. This importance cannot well be overemphasized in discussing railroad failures. In the very earliest days of railroad building this evil showed itself in the extension of railroads into well-developed territory without measuring the cost of construction; during the third quarter of the last century it took the form of extension into territory insufficiently developed, economically, to maintain a railroad. Subsequently, failure has resulted from the overbuilding of branch-line feeders in the hope of "creating" new traffic. Still more recently railroad systems have been afflicted by a weakness incident to mere size, such as combination of several groups into single vast systems or even (as has been true many times) the embarkation of the railroad in other remotely connected industries. With this overexpansion the business as a whole earned a steadily declining rate of return on the average unit of investment. It became thinner, through a rather rigid application to the railroad industry of a kind of diminishing return on capital investment. As large amounts of money were required to meet the costs of extensions, overexpansion of a railroad was accompanied almost inevitably by an increase in the funded debt, both relatively to the total invested capital and absolutely per mile of railroad. Two tendencies, therefore, operated at the same time, a decrease in earnings and an increase in the interest payments required by the funded debt. Ultimately the interest charges exceeded the earnings and the company failed. But this failure was

invariably postponed by the operation of palliatives—first the expenditures for maintenance were cut to the marrow, and then a large floating debt was piled up.

**Purposes of Reorganization—1. Reduction of Fixed Charges.**—In view of these generalizations, surprisingly free from exceptions, if one considers the variety of origin, location, and administration of our railroads, it is possible to observe that every railroad reorganization must penetrate beneath the tangle of proximate causes and either lop off the wasting parasitic growths resulting from overexpansion, or else so remold the financial plan of the railroad that the interest charges shall be less, not greater, than the net earnings. Frequently the reorganization plan has involved a reduction in mileage, especially in those cases of most obvious overexpansion. Although this may be a tacit admission of previous mistakes, the old management invariably ascribes the failure to superficial rather than ultimate causes. Consequently the other alternative, that of recasting the financial plan so that the fixed interest charges shall lie well within the earnings, is the underlying motive of every reorganization. About this, every other feature of the reorganization turns. It is felt by all concerned that failure was due to maladjustments from rapid expansion, and not to the expansion itself. It is assumed therefore, that if the road is given relief from its overpowering burden of fixed charges, it will recover its poise. Railway pioneers in earlier days and railway expansionists in the last epoch have been constitutionally optimists; they prescribed merely a rest for their patient—not surgery. The history of railroad reorganization practice, as we shall see presently, has been the history of a gradual realization that the rest, to be permanently curative, must be accompanied by surgery.

Reduction in fixed charges was, therefore, the primary



purpose of every railroad reorganization, but it was not the only purpose.

2. **Collection of New Money.**—It has been stated already that a railroad on the verge of bankruptcy can postpone the acknowledgment of its failure by two means—a reduction in the expenses necessary to maintain the physical integrity of the road, and an increase in the amount of its floating debt. Both means are adopted. Consequently, when failure is finally admitted through the appointment of a receiver, the court finds the road very much out of repair because of insufficient maintenance expenditures, and heavily weighed down by a burden of floating debt.

Formerly the rehabilitation of the road and the liquidation of the floating debt were allowed to wait until the period of reorganization; but of recent years courts have permitted receivers to borrow money on their own certificates for these purposes. In any event the plan of reorganization must provide sufficient money either to rehabilitate the road and pay its prereceivership debts directly, or else to pay the receivers' certificates which had been sold for the purpose of accomplishing these ends during the receivership. Ample new money, then, under any circumstances, is the second essential purpose of every railroad reorganization. And since the credit of the bankrupt property is low, both because of its previous history and the notoriety given to it by the fact of a receivership, outside investors will not buy its securities. The new money must be extracted from the old stockholders, who are the only persons sufficiently interested in the property to make sacrifices to help it in its hour of need.

While these two purposes, the collection of new money from old security-holders and a reduction in fixed charges, have been the paramount issues in every railroad reorganization, they have not been accomplished by the same means.

This is what makes the analysis of railroad reorganization difficult if one stresses the means employed rather than the ends achieved. On the other hand, since the ends to be achieved are so strikingly uniform, we can define a railroad reorganization as a comprehensive change of the financial plan, necessitated by impending or actual failure, such that the fixed charges are reduced and new money is supplied through the sacrifices of security-holders.

### Principles and Practice of Railroad Reorganization.—

Principles of reorganization practice were thoroughly established by the thoroughgoing and drastic reorganizations of the large railway systems during the middle nineties, and these principles were applied with uniform precision to the recent cases. Omitting, for the purpose of this introductory survey, confusing exceptions and unimportant details, one may summarize contemporary reorganization practice in the following general terms:

So far as the formal procedure is concerned, a reorganization brings about an adjustment—represented usually by a compromise—between the strict construction of the legal obligations of the various security-owners and creditors of the road, and the necessity, from the public point of view, that the railroad maintain its service as a solvent, responsible, and progressive corporation. It is the balance between private and public interests. While pretending to hold to the strict construction of the legal contract, the courts have been inclined to allow all interests, no matter what their equitable rights might be, to participate in the reorganization, provided an improved railroad service can be promised to the public. Neither state nor federal laws have much to do with determining the character of railroad reorganization. The parties most concerned are encouraged to work out any plan that is expedient and approximately just provided it is socially and economi-

cally sound. And the resulting compromise between the strict rights of the bondholders, the blasted hopes of the stockholders, and the welfare of the public, is based on expediency tempered by justice rather than justice tempered by expediency. It is carried through under the sanction of a system of law which has grown up as a response to the peculiar economic conditions of a new country, a system of law which has sought to preserve the forms of a legal practice existing long before railroads were conceived, while modifying its substance to meet the actual conditions of railroad success and failure in this country.

So far as the specific results are concerned, the present practice rests, as has been previously suggested, on the elemental principle that two primary ends must be achieved in every railroad reorganization. The more immediate, but less fundamental, is the collection of a fund of money, obtained primarily by a levy on the stockholders, out of which to pay the accumulated debt at the time of the receivership, the improvements of the road during receivership, and the expenses of reorganization; and finally to provide the means that shall keep the reorganized road from incurring new floating debt during the period of its rehabilitation. The second end is the reduction in fixed charges. The letter of the railroad mortgage bond has come to be nothing more than mere legal verbiage, but if the property covered by the mortgage has earned its charges the mortgage is allowed to remain and the bondholders are not asked to make sacrifices. If on the other hand, the property behind the mortgage has failed to earn its charges the bondholders are forced to accept a lessening, perhaps a total extinction, of their right to demand a fixed income. They may object, but they are powerless to resist, except by acquiring the actual property itself at foreclosure sale; and the failure of their property to earn its charges prior to the receivership gives little promise that its earnings would be better after

the bondholders themselves have exercised the letter of their legal rights and acquired by themselves alone the actual operation of the road. We have here another illustration of the fundamental truth that the economic value of physical property is no greater than its inherent earning capacity.

**The Reorganization Plan.**—The syndicate of bankers that is called into existence to finance the reorganization will probably dictate the plan. Normally the plan will provide for the  
1. formation of a new corporation which shall take over the assets of the old one, subject to such underlying liens as are not affected by the reorganization. The syndicate is then in a position to issue entirely new securities which are superior to every liability of the old corporation except the undisturbed prior lien bonds. Such new securities are ordinarily of three classes. They may be designated as the fixed charge, the contingent charge, and the common stock securities. The first class will consist of a large issue of general mortgage bonds having a small interest rate, the aggregate of which is less than the net earnings of the railroad during the receivership. The second class will be income bonds or non-cumulative preferred stock—preferably the latter—the interest or dividend payments of which, together with the interest on the other bonds, will bring the capital charges to an amount somewhat less than the maximum income prior to receivership. The third class will be the common stock, large in amount, but having no fixed or contingent charge. It is distributed freely in order to placate the old security-holders.

The plan will propose as well to secure new money in order to pay the floating debt, the receivers' certificates, and to improve the physical property of the road. This new money will come from two independent sources. A syndicate will purchase of the new corporation a block of the new general mortgage bonds. The holders of the stock and possibly the

junior bonds of the old corporation will be taxed or assessed as much as they can be induced to pay for the privilege of acquiring a subordinate interest in the new corporation. This participation is usually represented by a combination of contingent charge securities and common stock. To assure the new road the proceeds of these assessments, the syndicate which has undertaken to buy a part of the issue of general mortgage bonds will probably agree to pay the assessment demanded of any delinquent stockholder and assume his rights in the new corporation.

The same idea can be restated in the uses to which the three new classes of securities are put. The bonds involving fixed charges are given in exchange for a part or all of those of the old bonds upon which it can justly be claimed that the interest was earned and will be earned under all circumstances. The rest are sold to the syndicate for money. The securities bearing contingent charges, together with the common stock, are given in varying combinations to the holders of those old bonds, the interest on which had not been fully earned, and to the stockholders, on condition of the payment of a certain tax or assessment. As a result of these transformations the almost invariable consequence of every railroad reorganization since 1895 has been that the road emerged from its troubles with a lower fixed charge against income but with a higher total capitalization. The bonds and the fixed interest charges are reduced; but the par value of the preferred and common stocks is increased, by reason of the necessity of distributing these securities freely in return for the sacrifices made by the old junior bondholders and stockholders. We are thus presented with the striking anomaly that the bankruptcy of a railroad corporation leads to a direct increase of its total issued securities. We are also presented with the even more striking fact that in the presence of financial failure the public service character of a railway corporation is most clearly shown.

### Classification of Railroad Failures and Reorganizations.—

This brief outline of the form of contemporary railroad reorganization is altogether too general and superficial to be of significance when applied to concrete cases. All railroads differ among themselves. The specific causes of railway failure are never the same in two instances, so that the specific remedies to be applied will necessarily vary according to the individual case. Consequently, in order to discuss reorganization plans in any except the most general terms, and to treat of the subject with clearness and definiteness of outline, it is necessary to arrange railroad reorganizations themselves according to some kind of system of classification, else any detailed discussion of the subject degenerates into a mere jargon of unordered cases. But a classification of railway reorganizations is difficult, owing to the difficulty of determining a proper system.

From all points of view, the most valuable way of classifying railroad reorganizations themselves (and the practical expedients used in accomplishing the two primary ends), is in terms of the causes and extent of the embarrassment which occasioned the necessity of reorganization. In other words, reorganizations are best classified according to their causes. Financial embarrassment, actual or threatened, is the cause of the crisis of which reorganization is the remedy. A reorganization, therefore, can be successfully consummated only as it removes the cause, so that any attempt at classification must recognize that the form as well as the concrete details of railway reorganizations will vary according to the nature, extent, and seriousness of the failures which caused them.

There are, in general, three types of railway failures—two pertaining to large railway systems, the third confined to small independent railroads.

1. Primary Failures.—The first type, which we will hereafter call “primary failures” and the resulting reorganizations,

"primary reorganizations," or class 1, is the result of a crisis which is serious, thoroughgoing, and usually long protracted. This class embraces the real financial and economic failures of our large railways. In the actual experience of a particular case one may assume that the crisis has been coming on for many years. Various palliatives have been applied. Various expedients have been tried; not infrequently some expedient has even approached the scope of a reorganization. Every known device of economy of operation has been tested. Usually the railway system has been overextended into new or competing territory in the hope of increasing the stability of net earnings through increased gross revenue. Ordinarily, every available prop in the way of association and combination has been tried to increase the available net earnings; every known financial device of lease and guaranty, of collateral trust bond, debenture, and short-term note, has probably been resorted to in order to secure money and bolster up a declining credit. All these expedients are at most mere palliatives. They avail nothing. The net earnings continue to decline; the bond interest and rentals increase more rapidly than the earnings. The margin available to the stockholders grows narrower and narrower, and the credit poorer and poorer. Such conditions are fundamental. Yet as the current liabilities of a railroad are always relatively small and its floating debt is, or ought to be, insignificant compared with its total capitalization, the conditions described may continue for some time before a specific crisis brings about an outward acknowledgment of failure. The important consideration, however, is that the railway system as a whole is a failure economically. Its earning capacity cannot justify its capitalization.

**2. Secondary Failures.**—The second class, called hereafter "secondary failures" and the reorganizations "secondary reorganizations," or class 2, embraces those railroad failures

which cannot be called fundamental. The earnings for a few years past may have fallen off; bad crops, floods, or strikes in the principal industries may have produced conditions seriously affecting the gross receipts, while the operating expenses and fixed charges remained the same; short-term notes or a maturing bond issue may have created financial embarrassment. At all events, a crisis occurs and the railroad's credit cannot withstand it. Failure results. But the causes underlying it are not fundamental. And the remedies that need be applied are neither as comprehensive nor as radical as is necessary with failures of the primary type.

3. **Failures of Small Lines.**—The third type, class 3, pertains to small, unimportant, often unfinished lines of railway. Sometimes the existence of the road was unjustified by the volume of traffic. Sometimes the road was built merely for strategic purposes. Sometimes the road was so grossly overcapitalized and mismanaged, during the construction period, that it became insolvent before it was born. At all events the railroad is a thoroughgoing failure. But this failure, due to the absence of its obvious public necessity, is not of great economic significance. Its securities are probably closely held and the failure is not confessed until the last phantom of its credit has vanished. In the restricted and local significance of their undertakings, and in the extent and thoroughness of their distress, the failures of these little local lines resemble the failures of small local industrial enterprises. Failures of this kind are hereafter called those of the third class.

**Primary Reorganizations.**—Reorganization plans and expedients follow closely this classification of railway failures. The reorganization of a railway, the failure of which is of the first class, is thorough, comprehensive, and radical. Practically all securities, even small underlying closed first mortgage



bond issues, are refunded. And while the holders of these underlying bonds are not ordinarily asked to endure any sacrifices, they are asked to refund their variety of divisional issues into a single comprehensive first mortgage bond issue covering the entire railway system. Ordinarily the interest rate on this single issue is lower than the average rate on the small issues which it refunds, so that it is often necessary to increase the principal or add a complement of junior securities in order to placate these old bondholders. The holders of junior bonds, provided the interest on them can be earned unquestionably, are usually given bonds of a "general" or refunding issue. All other bonds, upon which little or nothing was earned in the years before the failure, are forced to take a preferred stock in the new company. The old preferred and common stocks are assessed, and offered new preferred and common stock. As a result of these changes a complex financial situation, involving a multitude of small divisional issues, followed by several layers of nondescript bonds, followed in turn by notes and preferred and common shares, is simplified and standardized. There are one or two senior issues of bonds; one issue of preferred stock, and one of common. Considerable amounts of new money are added through stockholders' assessments; the fixed charges are reduced by the refunding of the old underlying and first mortgage bonds into one or two issues of new low-interest-rate bonds, and by refunding the junior bonds into preferred stock. The reorganization, like the failure it follows, is penetrating, drastic, and comprehensive.

These principles can be understood from the detailed study of the refunding operation in one of the recent comprehensive reorganizations, that of the Pere Marquette Railroad in the autumn of 1916. In this reorganization all of the underlying and divisional bonds were refunded into a single issue of general first mortgage bonds—part of which bore 5 per cent interest and part 4 per cent. There were in all 11 separate



PLAN OF REFUNDING UNDERLYING AND DIVISIONAL BONDS, PERE MARQUETTE REORGANIZATION OF 1916  
(Continued)

Name	New Securities Used for Refunding (continued)					
	5 Per Cent Preferred Stock		Common Stock		Fixed Charge	Increase or Decrease
	Per Cent	Amount	Per Cent	Amount		
Flint & Pere Marquette First Mort.					\$212,000	— \$ 28,000
Flint & Pere Marquette First Mort.					50,000	+ 10,000
Detroit, Grand Rapids & Western First Cons.					215,160	same
Chicago & West Mich. First Mort.					287,900	same
Toledo Division First Mort.					20,000	same
Flint & Pere Marquette First Mort.					137,080	— 5,420
Indiana Division First Mort.					27,000	same
Saginaw, Tuscola & Huron First Mort.					40,000	same
Port Huron Division First Mort.	60	\$1,995,000	30	\$ 997,500		— 166,250
Chicago & North Michigan First Mort.	33 1/3	555,700	66 2/3	1,111,400		— 83,350
Grand Rapids, Belding & Saginaw First Mort.			100	260,000		— 13,000
		\$2,550,700		\$2,368,900	\$989,140	— \$286,020
						\$127,535

issues of underlying and divisional bonds, aggregating \$26,314,000 and carrying fixed charges to the amount of \$1,275,160, or an average of 4.8 per cent. These 11 issues occupied very different strategic positions, both with respect to the status of their lien and the geographical position of the section of the railway securing them. The earning capacity of the branch lines varied also. With these differences it is possible to classify these 11 issues into the three classes described in an earlier paragraph.

As a result of the process of refunding, the principal of these underlying and divisional issues was reduced by almost \$5,000,000 and the fixed interest charge from \$1,275,160 to \$982,140—a reduction in charges of over 22 per cent.

**Secondary Reorganizations.**—Reorganizations following failures of the second class are superficial compared to those described in the previous paragraph. As the failure is not fundamental, a radical readjustment of the financial structure is neither necessary nor advisable. Accordingly, no attempt is made to disturb more than the stocks and junior bonds, and no radical sacrifice is demanded of any security-holder. In many cases the whole reorganization turns on the willingness of the holders of some large overlying issue of refunding bonds, notes, or debentures to refund these into preferred stock or income bonds, bearing the same nominal investment return. The charges on the junior bonds become contingent instead of fixed. In return for this sacrifice from the junior bondholders, the stockholders consent to an assessment, receiving in return securities of relatively high value. As a whole, such a reorganization disturbs a comparatively small number of securities, and these are only the uppermost layers of the financial structure. The failure is not serious and a serious remedy is not required.

In a reorganization of this class the underlying and first

mortgage bonds are in no way affected. The railroad, both in the period before the crisis and during the receivership, fully earned the interest on these bonds. But this is not true of the junior securities. The interest on these was not earned and the necessity of paying it precipitated the crisis. At this level, and only here, it is expedient and just to demand a sacrifice. Accordingly, the holders of these junior bonds are asked to refund them into contingent charge securities—income bonds or preferred stock. This involves the total extinction of the obligatory interest. These junior bonds, together with the stocks, are the only securities disturbed in a reorganization of this kind. And the new preferred stocks or income bonds given in exchange are quite as valuable as the old junior bonds, considering the decreased earnings of the road, so that little real sacrifice is asked of any of the bondholders.

Within recent years there have been three typical reorganizations of this class among important railroad systems. They were the last reorganization of the Wabash in 1915 and the reorganizations of the Chicago, Rock Island and Pacific, and the Missouri Pacific in 1917. The plan adopted was exactly the same, except for individual peculiarities and unimportant details. The underlying and divisional bonds were undisturbed. In each case the decrease in fixed charges was brought about by refunding one or more issues of junior bonds into a preferred stock having a position just one step inferior to the security given for the stockholders' assessments. That is, the uppermost layer of bonds was refunded into a medium-grade stock. Absolutely nothing was done to disturb any of the other layers of bonds.

Often, among failures of this second class, the conditions are not sufficiently serious to warrant even a forced or involuntary reorganization. A kind of "capital adjustment" is considered sufficient, the object of which is merely to reduce or extinguish some particularly burdensome fixed charges.

*Chicago,  
Missouri  
and  
St. Paul  
in 1915*

Often in such cases the owners of the upper level of fixed charge bonds consent to exchange them for an income bond or preferred stock. That is all there is to the "adjustment"; a fixed charge on a portion of the funded debt becomes contingent and the immediate occasion of bankruptcy is thereby averted.

**Reorganization of Small Railways.**—Reorganizations of railway failures of the third class are exceedingly drastic. The little road has been bolstered up by every conceivable means. Probably when it failed the earnings were actually less than its expenditure. The rolling stock and roadbed are dilapidated. Consequently, relatively large amounts of receivers' certificates are issued immediately in order to maintain the road in operation. At the time of reorganization these must be paid. Yet the value remaining to the stockholders is so slight that they will not endure an assessment in order to maintain even their shadow of an equity. As a result the full brunt of the reorganization falls on the bondholders. Ordinarily there is a single issue of bonds. Accordingly, the holders assess themselves to pay off the receivers' certificates and to furnish the requisite new money. In effect, they take over the ownership of the road from the old stockholders. In some instances not only the stockholders' interests are eliminated, but also those of all the bondholders, and the road is taken over by the holders of receivers' certificates. In cases of complete failure the holders of the receivers' certificates may be forced to assess themselves to maintain the operation of the road.

**Increased Capitalization.**—It has been pointed out by all the writers on railroad finance that every railroad reorganization, at least until the last few years, involved an increase in the nominal amount of securities. The reason was that in order to induce the holders of junior bonds and stock to undergo sacrifices, they must be placated by liberal bonuses of well-

nigh worthless junior securities of the new road. This policy was summed up some few years ago in the following manner: As a result of the shifting of securities the majority of railway companies emerged from reorganization burdened by an increase in capitalization. Reorganization acted as a drug to tide over a period of weakness—the future was mortgaged to satisfy the present. This view, perfectly justified by the data available from all the railroad reorganizations down to 1912 is not true of contemporary reorganizations. The tendency since 1910 has been so to plan reorganizations as to effect a reduction rather than an increase of the net capitalization. Especially is this true of the old floating debt, which is funded by the reorganization, is included in the computation. The temptation to issue excessive amounts of junior securities no longer exerts a malign influence. The state railroad commissions have not countenanced the unbridled issue of junior securities, stockholders show a more intelligent discrimination between nominal and real value, and the era of railway promotion, with its exaggerated promises of future earnings, has passed. The railroad business is fighting now to retain what earnings it has; it no longer cuts its financial pattern according to the fabulous earnings of an unattainable future prosperity.

## CHAPTER XXVII

### THE REORGANIZATION OF INDUSTRIALS

**Difference Between Industrial and Railroad Reorganization.**—The methods that have been pursued in reorganizing industrial corporations have been analogous to those employed for railroads, but the general form and detailed structure of the plans differ markedly. This is because of the essential differences between railroads and manufacturing or mercantile enterprises. In their social status as public service corporations and from the similarity of their operation in furnishing a service and not a commodity, railroads are all alike.

**1. Fluctuation of Earnings.**—Industrial enterprises have little in common among themselves except the absence of those very characteristics possessed by public service enterprises. One class operates under the conditions of a protected monopoly, the other under conditions of free competition. There are no real monopolies of location in the industrial field, and whatever approach to monopoly can be discovered lies in the direction of control over patents or trade-marks. Therefore the earnings of any single industrial must be subject to abrupt fluctuations due to changes in the general purchasing power of the community and to changes in the managerial ability exercised by the men in control. From the beginning their financial plan must therefore be based on the presumption that the business can rely on itself alone in protecting its trade position, never on the community. This fact is paramount in formulating any plan for reorganizing an industrial undertaking.



2. **Absence of Funded Debt.**—Most industrial corporations, because of the fluctuating character of the earnings, were organized without bonds. For this reason many companies which have been, on the whole, unsuccessful, have been able to survive successive business depressions and single unprofitable years without ever meeting the necessity of reorganization. So long as they met the direct expenses of operation and possibly the preferred stock dividends, they could run along the even tenor of their way, however small their net earnings. The fact, therefore, that an industrial corporation has not been reorganized in no wise argues for its fundamental success.

Enforced reorganization of railroads has occurred, almost invariably, only after the actual or threatened failure to meet bond interest. Had the railroads been without bonds few, if any, reorganizations would have been recorded. But such is the insecure position of many industrials, buying and selling in competitive markets, that reorganization has been necessitated by the mere losses incurred by their ordinary business transactions. Thus in the six months prior to the reorganization of the old Consolidated Cotton Duck Company into the International Cotton Mills Corporation, the former company endured a net manufacturing loss of \$244,000 which was augmented by the payment of interest amounting to \$575,000. Many other industrial reorganizations have followed in the wake of conditions so unfortunate that, in spite of the fact that bond interest was absent, the corporation could not meet the expenses incident to its ordinary business.

3. **Position of Creditors.**—This suggests that general creditors of industrial enterprises are in a stronger position than the general creditors of railroads. Their liens are not ordinarily superseded by those of bondholders, nor is the practice of permitting the issue of receivers' certificates to take precedence over ordinary general creditors so often permitted

by the courts. The general creditors can, therefore, by threatening to liquidate the property of the company, force the stockholders to meet fully their claims. On the other hand, the internal organization of an industrial company, being sometimes the most valuable part of the corporation's property, would be jeopardized should the old management surrender the corporate assets to the creditors and start a new competing business of their own. The creditors are thus at a disadvantage in dealing with them, in spite of the apparent security of their claims. In view of all these considerations one is less able than in the case of railroads to form even tentative generalizations. One cannot say, for example, that a temporary shortage of money and a permanent overburdening of capital charges will be found present as a condition precedent to every industrial reorganization as is the case in every railroad reorganization. Nor can one find sufficient grounds for the presumption that relief from a heavy floating debt and a reduction of fixed charges are the invariable consequences of every industrial reorganization. The most that can be said is that ordinarily in industrial reorganizations some new working capital is supplied and there is some readjustment of the forms of capitalization. And while this readjustment of the capitalization is likely to entail a lessening of the fixed charges, cases are by no means uncommon in which a reorganization burdened an industrial with new and increased charges.

**4. Possibility of Liquidation.**—Unlike railroads, industrial enterprises may ordinarily be liquidated if such a course seems expedient. Sometimes it is even expedient to liquidate a business before a critical condition has arisen, especially if a large part of its assets are easily salable. Yet under the best conditions the sale of corporate assets is bound to show losses as compared with their book value. If the enterprise has little hope of success it will be best under all circumstances for those

interested to recognize the fact and sell the property for what it will bring, even though the creditors will suffer considerable loss and the stockholders entire loss. Experience drawn from various enterprises that were reorganized several times in succession shows that, severe as would have been the losses at the time of the first reorganization, they were small compared to those endured by the men who continued to add new money at the time of each successive failure.

**5. Significance of the Personal Element.**—The most conspicuous difference, however, between railroad and industrial reorganization is the greater significance of the personal element in the latter. It was asserted in the opening paragraphs of the second chapter of this volume that human or psychological considerations were the most important and often the determining motives in all reorganizations. This assertion is conspicuously true in the case of industrial reorganizations, whether one considers the reorganization of a little village factory or that of a great enterprise like the Westinghouse Electric and Manufacturing Company, with branches and affiliations all over the world. The popularity of the chief executive officers is able often to carry such weight with bankers that a plan of reorganization is accepted which otherwise would have been thrown aside; the dislike of business associates toward some man has often been the direct cause leading to a crisis in the affairs of a corporation with which he was connected and the ultimate acceptance of a plan of reorganization the main purpose of which was to eliminate him from the management. Jealousy always plays an important rôle. Personal likes and dislikes determine the lines of cleavage among the various interests directly affected and the strength of these lines of cleavage determines the plan of reorganization ultimately imposed on all concerned. These personal motives are seldom apparent on the surface, yet they exert a

subtle influence at every turn in all industrial reorganizations.

**Chief Object of an Industrial Reorganization.**—If it is decided that the business shall be reorganized it is necessary to discover the causes of failure. As already pointed out in another connection, corporations do not ordinarily fail because of lack of working capital, but rather the appearance of a lack of working capital is an outward sign of fundamental difficulties. The real cause of industrial failure is quite as little apt to be a difficulty of securing credit due to sudden tightening of the money market as in the case of railroad failures, although, if there is any opportunity, this cause will be alleged. As in the case of railroads, the real reason underlying the difficulty in securing further bank loans is not the obstinacy of the banks but the impoverished credit of the company. Quite probably the corporation paid interest on debt and even dividends out of capital during the period prior to the acknowledged failure, although this interpretation of their action will be avoided by the directors. Yet the fact will remain, whether cause or effect, that the failed corporation is in straits and requires more ready money. So that, as in the case of railroad reorganizations, the chief ends of industrial reorganizations are necessarily the removal of the underlying cause of the failure and the collection of new money. But in the case of railroad reorganizations, the underlying cause is usually connected with an excessive fixed charge. This is not always true with industrials, because many industrials in financial straits have been altogether without bonded debt. Consequently, although the purpose of collecting new money is invariably present in every industrial reorganization, the rest of the reorganization does not always turn about the problem of reducing the fixed charges. It may happen—in fact it often does happen—that the need for new money is so urgent that a new fixed charge is

added because the sale of first mortgage bonds is the only means available to obtain new money. The stability of the future is sacrificed to meet the necessities of the present.

**Obtaining Money for Reorganization.**—At the time of the reorganization free money is often obtained by the receivers indirectly by ceasing the payment of interest on debt or the principal of maturing obligations. If this is not ample, the receivers may be permitted by the court to issue receivers' certificates, although the reasons for the issue of these certificates must be more urgent and the amounts less liberal than in the case of railroads and public utilities. The indiscriminate and reckless issue of receivers' certificates, which the federal courts have tolerated in recent cases of railroad receivership, is absent in the case of industrials. The courts have assumed that the necessities of the public do not require the continuation of the business at a loss to the creditors and stockholders. Whether or not receivers' certificates are issued, the problem for the reorganization managers is the same—to obtain enough new money to meet the outstanding debts of the old corporation and to supply the reorganized corporation with adequate working capital.

**Selling Securities to Outside Banks.**—The simplest method of obtaining new money is to sell securities to outside banks. In this way the stockholders are not required to act individually nor to make conscious sacrifices, except perhaps the mere consent to a new bond issue.

If no mortgage or other form of funded debt exists, bankers will frequently consent to buy a small issue of first mortgage bonds of the reorganized company on the assumption that the assets are at least sufficient to cover the debt. In such cases, it is common for bankers to insist that the new company maintain large fluid assets further to strengthen the bonds.

And even when the new company is able to show assets far in excess of the new debt, the difficulty lies in finding investment bankers who will consent to buy any securities whatever of an enterprise known to be on the verge of bankruptcy. Without regard to the fundamental security of the bonds, bankers of high standing are unwilling to permit their names to be connected with enterprises likely to become notorious through repeated failures.

As a rule, therefore, bankers are willing to advance money to relieve a threatened or actual failure, only in those cases in which the embarrassment is to be traced to causes easily discovered and easily remedied. Future success then turns upon the question of management. To safeguard themselves against bad management and even a repetition of failure, and to give the corporation the advantage of their specialized knowledge, the bankers who do advance money under such circumstances always require that at least one of their associates be elected to the board of directors. It is quite usual for them to go even further and assume the actual financial administration of the new corporation. Furthermore, to secure this co-operation and to make the bankers' interest in the new company worth while the corporation may pay the bankers' commission partially or wholly in common stock. Very frequently the greatest benefit resulting from the reorganization is the new moral support of the bankers and the general confidence which this support engenders. Their money is soon spent, but their co-operation remains. As a result of these considerations it may be said, in summary, that those reorganizations in which the new money has been supplied by independent bankers have followed, almost invariably, failures of the least serious sort. This is particularly true of failures attributable to some temporary emergency not likely to occur again—such as the sudden tightening of the money market or the immediate need for new equipment.

**Assessment of Security-Holders.**—When the necessary new money cannot be obtained by such simple means as the sale of treasury assets or the quiet sale of new bonds to outside bankers, it must be subscribed by the stockholders. This method, although perfectly fair, because the stockholders are the real owners of the business and should bear the burden, is found difficult to apply in practice because of the reluctance of stockholders to face the result of failure squarely. In deference to this feeling and to remove the taint of assessment, it is common to give to the stockholders a new contingent charge security in return for their money contributions. This usually takes the form of a preferred stock and is not likely to be as carefully safeguarded as the bonds which are sold to bankers. Yet no bonds are placed ahead of it, for otherwise the stockholders would not subscribe. If there is reason to suppose that the stockholders will not voluntarily submit to what is virtually an assessment, the directors may find it necessary to throw the corporation into the hands of receivers and submit to a judicial sale of its assets. In no other way can the non-contributing stockholder be eliminated. But, as in the case of railroads, this extreme method of coercion is both expensive in money and destructive to the credit and trade position of the corporation. It is resorted to only in extreme cases when the recalcitrant stockholder cannot be reached by all the arts of persuasion. The second Westinghouse reorganization of 1908 is notable in that no sale of the corporation occurred and the stockholders contributed a large amount of money, for which common stock only was given them. However forceful this exception appears, the fact remains that threatened loss of their entire investment alone is ordinarily able to wrest new money from stockholders.

An unusual but efficient and direct plan is followed by the Massachusetts textile mills when they find their credit impaired. The stockholders first authorize the reduction of the capital

stock by a certain proportion, possibly 50 per cent. This involves the cutting of each stockholder's interest in half. They then authorize the sale of the stock surrendered at par to either the old stockholders or outside bankers. The final result of these two steps is a substantial increase in the available money, without any increase whatever in either the amount of stock outstanding or the direct liabilities. This method has been applied in other reorganizations outside of New England, but in a less drastic form. Its advantages lie in its simplicity and the slight dislocation of the corporation's business which is likely to occur. It is merely a matter of sacrifice on the part of the stockholders to enable the corporation to strengthen its general credit.

Money can be obtained from bondholders only in case the funded debt is considerable and the apparent equity remaining to the stockholders comparatively small. If there are reasons to believe that the assets of the corporation can be liquidated or can be sold at judicial sale for an amount sufficient to cover the bonded debt, no pressure can be brought against the bondholders. They would prefer to "allow the law to take its course" rather than to contribute to the relief of the company. It is therefore only in cases of extreme embarrassment that help may be expected from the bondholders; and it follows from this that the worse the failure proves to be, the more the bondholders will be concerned in the reorganization. Yet even when no equity remains to the stockholders and the corporate assets are less than the debt, it is usual to allow the stockholders to come into the reorganization on the payment of a heavy assessment in order to maintain the continuity of the business organization. Care must be taken, however, to ascertain either that this stockholders' assessment will be paid, or that the failure of the stockholders to respond will not jeopardize the success of the reorganization. When the stock of the old company is selling at a few cents a share in the market, it is



evident that the stockholders will make little sacrifice to save it, and the bondholders would probably do well to reorganize the company alone without the tentative help of the stockholders. If more than one issue of bonds existed in the capitalization of the old company, some difficulty arises in apportioning the relative amounts which the different bondholders should contribute. Generally speaking, the underlying senior bondholders can be relied upon but little, and most of the new money must be collected from the junior bondholders. Yet if the junior bonds are of little value, their holders will relinquish all interest in the reorganized company rather than pay any considerable assessment. In such a case the senior bondholders have no other alternative than to furnish the money necessary with perhaps slight help from the junior bondholders. Such a reorganization plan would follow only the most serious failure.

**Assessment of Outside Creditors.**—Cases in which an assessment or money contribution is required of the outside creditors are very rare and are likely to occur only as a result of unusual circumstances. Either the outside debt is unsecured and there exist mortgage bonds which have a prior lien on essential assets—in which case the creditors are in a position analogous to the junior bondholders—or else the creditors are impelled to assist the corporation from reasons of permanent self-interest. In the former case they submit to the payment of a small assessment to enable the corporation to continue in business, knowing that if the assets were liquidated their claims could not be paid in full. As in many other instances a money assessment is wrung from a class of security-holders as the price paid for a chance to recover apparent losses.

In the latter case the reasons of permanent self-interest are those of continued profit through enabling the corporation to continue in business. Many of the unsecured creditors have

claims representing open accounts and merchandise notes, arising through the ordinary business relations with the failed corporation. These merchandise transactions have been a source of profit in the past, and the merchandise creditors have every reason to believe they will continue to be so in the future—provided the business can be rehabilitated. The creditors are therefore willing to buy its long-time notes—or even its stock—provided there is reasonable assurance that the new company will purchase goods of them in the future.

**Changes in Capitalization—No Uniformity.**—If we turn from those aspects of the financial plan of industrial reorganizations having to do with the sources of new money to those dealing with the permanent changes in the capitalization, there is discernible even less ground for possible generalizations. It was already pointed out that the principle laid down in railroad reorganization, that the fixed charges were invariably reduced with the possible increase in total capitalization, does not hold true in the reorganization of industrial enterprises. Not only may the total capitalization be increased by the reorganization, but that portion having fixed charges is as likely to be increased as not. In fact, one of the commonest means of relieving a company in financial difficulties has been to fund the current debt into first mortgage bonds, though the company may have had no funded debt before. The specific form of the reorganization plan is therefore determined by two independent sets of circumstances, the financial structure before the embarrassment and the seriousness of the embarrassment. As the financial structure of all our great railway systems is essentially the same, an important distinction among railroad reorganization plans could be based on the seriousness of the failure alone; but owing to the fact that this unity of financial structure does not prevail among industrials no such simplicity of classification is possible.

**When Object Is to Escape Unpaid Dividend Charges.—**

Those reorganizations consummated primarily to relieve the corporation of an accumulation of unpaid preferred dividend charges, usually avow a balance of advantages to both preferred and common shareholders. They involve, ordinarily, some capital readjustment which brings the common stock nearer to the payment of dividends and turn almost always upon some modification of the preferred stock contract. The holders of this class of stock, knowing that their claim to unpaid dividends is indirect, and that they are powerless to enforce the payment no matter how large the earnings of the corporation may be, are usually willing to release their claim to dividends in return for some concession from the corporation. In rare instances only it amounts to the payment of the accumulated dividend in money. It may take the form of: (1) the issue of a new higher dividend-paying preferred stock in exchange for the old cumulative preferred stock with its arrears of unpaid dividends; (2) a funding of the preferred stock dividend accumulations into new securities; (3) the funding of the old contingent-charge preferred stock, with its accumulated dividends, into new bonds bearing interest charges lower than the dividend rate on the old preferred stock. All these methods have been used with success. Invariably, the management, controlled by the common shareholders, represents that the plan to be adopted is of mutual benefit to all classes of security-holders. In some cases it is, in other cases it is not. For one observes easily that in each of the means adopted the direct charges of the corporation are increased. And the advisability of the whole readjustment depends on whether or not this disadvantage is more than balanced by greater advantages.

**When Object Is to Decrease Floating Debt.—**Much more important are those industrial reorganizations which are

planned primarily, often entirely, to relieve the corporation of an overpowering burden of floating debt. Until the recent practice of railroads in issuing short-term notes had brought about its evil consequences, failures and reorganizations resulting from an embarrassing burden of floating debt were confined to the history of industrial corporations. The long-established practice of the vast majority of industrials of carrying at least a part of their quick assets by means of short-time loans from the banks, places the industrial in a peculiarly vulnerable position when the lending banks refuse to continue or extend the corporation's notes.

Peculiar difficulty is found in differentiating reorganizations of this class from all others, because the management of every embarrassed industrial alleges at the time that the difficulty is due entirely to the obstinacy of the banks, or their inability to extend credit further. Were these diagnoses made by the embarrassed corporations themselves to be taken at their face value, every industrial failure and reorganization would be of this class. But the diagnosis of the corporation is seldom correct. Other more fundamental causes usually underlie the withdrawal of credit. In some few instances, to be sure, an unmanageable floating debt is the fundamental cause, just as the corporation's officials declare, but its existence is to be attributed much more probably to the stupidity of the management in allowing the debt to pile up than to the obstinacy or limitations of the banks.

The crux of all reorganizations of this class is, obviously, the means to be taken to pay or to fund the floating debt. A receivership is nearly always resorted to in order to prevent the possibility of attachments, so that there is ample time to consider the means available. If there is no mortgage on the property of the company, the easiest plan to execute—and for that reason the one most frequently followed—is to sell an issue of first mortgage bonds to bankers, and with the proceeds

pay off the holders of the floating debt. If the management and the stockholders are unwilling to do this, or if there already exists a mortgage on the property, then a reorganization has to be carried out which involves a direct as well as an indirect sacrifice on the part of the old security-holders. In other words, the old stock or bondholders, or both, must suffer an assessment and take new junior securities in return; and with the proceeds of the assessment a part or all of the floating debt can be paid off. This is merely the use of the general principles already discussed under railroad reorganization expedients, except that no particular effort is made to decrease the fixed charges.

One feature of industrial reorganization plans of this class—intended to do away with an unmanageable floating debt—deserves at least passing notice. It is the provision in the vast majority of such plans to force the holders of the debt to take securities as a part of their claims. The old noteholders and merchandise creditors are asked to accept some percentage, perhaps 50 per cent, of their claims in cash and the rest in long-term notes—usually of various maturities. The creditors ordinarily accept this compromise. They recognize that by forcing the corporation into bankruptcy they can undoubtedly secure the collection of at least a part of their claims, but the remaining part will be forever lost. Whereas if they show a willingness to co-operate with the stockholders to the extent of funding a part of their debt into 1-, 2-, or even 5-year notes they give the stockholders an opportunity to work out the rehabilitation of the company, and with its rehabilitation the creditors can ultimately secure the full payment of their obligations. At least, this is the kind of argument advanced to them and to which they are usually amenable.

**When Object Is to Lessen Fixed Charges.**—Those industrial reorganizations which are consummated for the

avowed purpose of lessening the fixed charges, are invariably the result of failure. If the failure is not serious, or if the corporation has merely shown a continued low earning power while its affairs have never reached a serious crisis, it is sometimes possible to induce bondholders to consent to a lessening of the principal and interest of their bonds. But ordinarily bondholders will not endure even a nominal sacrifice without coercion, and the various steps of default, receivership, and foreclosure sale have to be followed in order to compel the bondholders to submit to a lessening of their charges. When such steps are necessary the industrial reorganization differs, so far as the plan is concerned, but little from the typical railroad reorganizations discussed in the previous chapters. There is, perhaps, a little greater tendency to deal harshly with bondholders in requiring them to exchange bonds for stock, but the general principle that industrial enterprises ought not to have bonds in their financial plan is ample excuse for taking advantage of the opportunity of a reorganization to eliminate entirely the funded debt. At all events the principle holds true, as in railroad reorganizations, that the corporation must be relieved from the burden of fixed charges in order that it may strengthen its own internal organization and its mercantile credit. Permanent strength can be obtained only through a period of rest and reconstruction. And this principle, in spite of the varying circumstances of its application, must be the paramount motive in every industrial reorganization where failure is to be attributed primarily to a burden of fixed charges.

In these reorganizations involving a decrease or the entire cancellation of the funded debt, the problem always turns on the kind of security the bondholders are willing to accept. If the security offered is not satisfactory to them they are in a position to force the liquidation of the assets of the corporation. This result would give the bondholders the little that there was and the stockholders nothing. Even at the time of involuntary

reorganizations, therefore, some advantages must be attached to the new stocks offered in exchange for the old bonds—or the stockholders must otherwise strengthen the corporation's credit—else the bondholders will not accept them. These advantages are, on the one hand, a heavy cash payment by the old stockholders into the treasury of the new company in exchange for a second preferred or common stock, and, on the other hand, the acceptance by the old bondholders of a new first preferred stock or an income bond. The rate on the contingent charge security offered the old bondholders is ordinarily a little higher than that carried by the old bonds. A higher contingent rate is exchanged for a lower fixed rate. Furthermore the new preferred stocks are seldom immediately cumulative in their dividend demands; yet, in order to protect the new preferred stockholders from the avarice of the common stockholders who maintain control, the preferred stock dividends are often made cumulative after a period sufficiently long to enable the reorganized company to have fully regained its credit.

**Advantages of Voluntary Reorganization.**—Whatsoever may be the primary purpose of the reorganization, whether to benefit one class of the security-holders or the general credit of the corporation through a lessening of the fixed charges, a voluntary reorganization is to be preferred to a receivership and foreclosure sale. Even more than with railroads and other public service corporations, the notoriety of failure, bankruptcy, and litigation impedes the normal business of an industrial corporation. Its general credit, including its banking facilities, is hurt; especially is its general trade standing imperiled. The internal operating force and the selling force become disorganized, careful as the receiver may be. Customers avoid business dealings with an insolvent concern. Fully conscious of all these considerations, those in control of the business will seek to effect a "friendly" reorganization, in

which the impending crisis is relieved by voluntary purchase of junior securities by one or more classes of security-holders. This is not possible if, as in the case of most large railroads, there are a host of creditors and conflicting interests, but such a solution is unquestionably possible at the time of a crisis in an industrial or even small public service enterprise, if the various security-holders and creditors are on friendly terms and not too widely scattered. Friction and sometimes almost insurmountable differences of opinion can be overcome if the affairs of the company happen to rest in the hands of a few keen-sighted men of conciliatory dispositions.

In the effort to bring about a "friendly" reorganization of an industrial corporation, a committee of the management usually sends to the various interests a plain statement of the actual facts. Perhaps the floating debt is too large and should be funded by voluntary action on the part of the stockholders, or perhaps the company is too heavily capitalized and a voluntary cutting down of the stock issues is necessary. Whatever the conditions, they are carefully explained to the security-holders and the remedy is pointed out, which invariably involves some direct or indirect sacrifice on their part. If a sufficient number agree to the plan it is declared operative and the managers proceed to put it into execution. There will be always some security-holders who will refuse to agree to the sacrifice. These will either be bought off or "carried" by the others. In such a case there is no receivership, no conflict of opposing interests represented by numerous committees, no foreclosure sale, and no reincorporation under a new name.



# APPENDIX

## PROBLEMS

### INTRODUCTORY NOTE

In accordance with a belief that the best way to teach corporation finance is by discussion of concrete cases, I have appended here a group of problems. They have been taken for the most part from actual experience, although many irrelevant details have been omitted. Practically all of them have been used on examination papers and for classroom discussion in the course in corporation finance in the Harvard School of Business Administration. Problem 80, for example, constituted one-third of a final examination paper.

The value of such a study as corporation finance is to teach students to think—not to teach them facts. These problems, many of them at least, are difficult; but it is to be presumed that students qualified to pursue a subject like this have passed beyond the stage of learning things by rote and welcome a method of instruction that taxes their powers of analysis and comprehension to the utmost. In order, however, to facilitate an even distribution of problems in courses extending over different periods of time and among students of different grades of maturity, an attempt has been made to classify the problems according to their difficulty. Those requiring considerable skill and maturity are marked with a star (\*), and those of marked difficulty are distinguished by a double star (\*\*).

Without laying down any rules for the use of these problems, it may be remarked that the writer has found it most useful to assign problems to the class and then to devote a considerable amount of time to discussing the several solutions offered. In

many cases, especially with problems covering promotion, expansion, and reorganization, there is no absolutely right or absolutely wrong answer. In each case it is a matter of financial expediency. The reasons why one solution of a problem is better than another should be carefully presented so that men will understand that financial practice is a matter of judgment. So far as possible, the class should be conducted as one might conduct the meeting of a large board of directors. The opinion of each member of the class should be given consideration and everyone should be led to feel that the reasons back of his judgment are worthy of respect.

It is absolutely necessary for a student to have clearly in mind the specific end or purpose of each problem. He should be urged to separate in his mind the essential parts of the problem not merely from the mere verbiage but also from the unimportant facts and figures. These essential parts he should study carefully in their relations with each other. Thus if the problem concerns itself with quick assets and these alone, a student should set down first all the information about quick assets and discard entirely from his consideration every other fact and every other possible deduction from irrelevant facts. He should then examine carefully the data concerning quick assets and make such deductions as the purpose of the problem involves.

A considerable number of the problems, especially those toward the end of the collection, permit of several answers. The student should discuss his own solution, indicating the grounds of preference over other possible solutions. He should give reasons for his grounds of preference and show their bearing on matters of financial policy. Thus in the preparation of the financial plan of a public utility, the necessary capital may, in a particular case, be secured either by a small issue of bonds and a small issue of preferred stock or by a large issue of bonds alone. A student who constructs his financial plan according to one or the other of these alternatives should state explicitly the reasons for his

choice, and, if possible, the fundamental principles behind these reasons.

So far as possible, moreover, the public significance of this subject should be emphasized. It should be borne in mind that corporation finance is one aspect of a great body of economic questions connected with our modern industrial life, and that no solution of financial problems is permanently sound which is not at the same time justifiable and wise from the point of view of public welfare. Sound investment subserves a social purpose in so far as it conserves accumulated capital for productive and socially justifiable enterprises and directs it away from useless highly speculative and socially iniquitous projects.

I cannot refrain from one very commonplace comment regarding the case method of study—of which the use of concrete problems represents one form. This general educational theory is based on the presumption that a student has not mastered a subject until he has been able to translate mere factual knowledge into action—until he can do something with his knowledge. Not only does the study of definite cases test the student's grasp on fundamental principles, but it also affords a form of training which should be the ideal of all educational processes—it creates conditions that force a student to isolate relevant evidence from a mass of detail and weigh this evidence in the light of principles. It creates a mental and moral power that enables a man to meet new situations in any field, wherever his life work may lie.

### **Chapter I—The Corporation and Its Financial Structure**

1. The following represents the report of an accountant covering the business of John H. Taylor, dealer in meats and groceries in South Lawrence, Massachusetts, as of January 1, 1922. Taylor proposes to incorporate his business and issue to himself and his wife all the shares of capital stock of a par value of \$100 each. How many shares will Taylor and his wife receive? What will be the balance sheet of the John H. Taylor Company after incorporation?

# CONDITION OF BUSINESS OF JOHN H. TAYLOR AS OF JANUARY 1, 1922

Merchandise.....	\$4,700
Store Fixtures.....	2,800
Wagons, Horses, etc.....	1,800
Accounts Payable.....	1,100
Accounts Receivable.....	1,600

2. A corporation owes nothing. It has fixed property to the value of \$680,000, cash to the amount of \$4,000, and bills receivable to the amount of \$116,000. It has no surplus account, but it has two classes of stock, common and preferred, equal in amount. The par value of the preferred is \$100 and that of the common \$25. How many shares of stock has the corporation?

\*3. Thomas Edwards, born in Fort Edward, New York State, in 1843, was apprenticed to a retail furniture dealer in Syracuse in 1857. Finally in 1874, having saved \$3,400, he entered into partnership with a man of his own age, for the purpose of purchasing the assets of a retail furniture business that had failed the previous year. The firm of Edwards and Hopkins prospered. Originally, Edwards had paid in \$3,400 and Brown \$7,600—making \$11,000 in all. They had paid \$27,000 for the business, giving \$16,000 in notes in part payment. By 1880 the partnership had paid the notes. In 1885 Hopkins died and Edwards acquired the former's interest in the business for the sum of \$18,000—an amount which he borrowed from local banks on the credit of the business. Edwards died in 1922, leaving two unmarried daughters both over fifty years of age. The balance sheet of the business at the time of Edwards' death was as follows (in even 000):

<i>Assets</i>		<i>Liabilities</i>	
Inventory.....	\$ 65,000	Current Accounts.....	\$ 7,600
Unmatured Loans.....	6,000	Proprietor's Interest.....	96,400
Accounts.....	24,000		
Fixtures and Wagons.....	3,500		
Overdue Notes.....	5,500		
	<u>\$104,000</u>		<u>\$104,000</u>

There were two clerks who understood the business, but who had only \$6,000 between them with which to purchase the business.

The executor of the estate proposed to liquidate the business and divide the proceeds between the two heirs. A friend suggested that a corporation might be formed to continue the business, under the management of the two clerks, and in this way the two maiden ladies would realize, in the end, more from their father's estate.

Point out the advantages or disadvantages of the friend's plan, and, were it accepted, how could the old proprietary business be transformed into a corporation so that the interests of the two ladies would be protected and at the same time the permanent interest of the two clerks be assured?

### Chapter II—Common Stock

4. The following represents the balance sheet of the Stoneboro Manufacturing Company.

<i>Assets</i>		<i>Liabilities</i>	
Plant.....	\$1,568,000	Capital Stock (par \$100)	
Patents and Trade-		Common.....	\$1,000,000
Marks (at cost, properly written down)...	768,560	Preferred.....	600,000
Raw Material.....	165,000	Mortgage Bonds.....	800,000
Goods in Process.....	278,000	Debentures.....	200,000
Finished Goods.....	73,650	Notes Payable.....	365,000
Notes Receivable.....	190,000	Accounts Payable.....	185,115
Accounts Receivable....	76,724		
Cash.....	22,863		
Deficit.....	7,318		
	<u>\$3,150,115</u>		<u>\$3,150,115</u>

- What is the capitalization of this company?
- What is its capital?
- What is its capital stock?
- What is the net worth of each share of common stock, provided the preferred stock could be liquidated at par?
- The owners of this business decided to exchange the common stock into stock of no par value. What changes should be made in the entries on this balance sheet to make it conform to the new condition?

In discussing this problem it is important to observe the differences in the uses of the two words, "capitalization" and "capital," in economic theory, business, and corporation finance.

5. The following is the statement of the Merchants Trust Company--member of federal reserve system. What is the book value or net worth of its stock?

## STATEMENT OF CONDITIONS

October 1, 1920

<i>Assets</i>		<i>Liabilities</i>	
United States Bonds.	\$306,704.90	Capital.....	\$200,000.00
Bonds and Securities	905,033.20	Surplus.....	200,000.00
Loans and Discounts.	2,627,073.33	Undivided Profits...	62,690.32
Bank Building, Vault, and Fixtures.....	90,300.00	Deposits.....	4,209,158.89
Cash on Hand and Due from Banks..	742,737.78		
	<u>\$4,671,849.21</u>		<u>\$4,671,849.21</u>

Should you say that bank stock would ordinarily sell for more or less than its book value? Give a series of questions that you might ask concerning a bank to ascertain whether the market value of its shares was greater or less than the book value. Would you expect to find the difference between the book value and the market value of the stock of a small country bank greater or less than the difference for the stock of a large New York bank?

Explain your answer.

\* 6. (This problem requires some knowledge of accounting.)

The Staniford Coal Corporation has total assets of \$785,000, and total notes, bonds, and bills payable of \$316,000. It has accumulated a surplus of \$127,000. It has outstanding \$300,000 of preferred stock, par value \$100 a share. The directors decide that the outstanding common stock, of a par value of \$10 a share, shall be exchanged share for share for common stock of no par value.

An accountant once said that the problem of bringing no-par-value stock onto the balance sheet of a corporation is an important and difficult problem, on the ground that accountants have no uniform method of treating no-par-value stock. He stated further that no-par-value stock can be brought onto the balance sheet in at least three different ways.

Prepare three different balance sheets of the Staniford Coal Corporation, after the above described change, showing three different ways of indicating the no-par-value stock.

## Chapter III—Bonds

7. The statutes controlling the issue of bonds by Massachusetts local public utilities require that bonds shall not exceed stock, and that the total securities to be issued by the utility shall not exceed the cost of the property.

The Berkshire (Massachusetts) County Electric Company was built at a total cost of \$316,000. What was the maximum amount of bonds that could be issued?

8. The Consumers Electric Light Corporation had outstanding in 1913 \$765,000, 5% mortgage bonds. The company was allowed under the original mortgage to issue additional bonds "for improvements, extensions, etc., at 85% of actual cost, and then only when net earnings applicable to interest were equivalent to 1½ times the interest charges on all bonds outstanding including those to be issued." Construction costs amounted in the preceding year to \$43,564. The gross earnings were \$312,000 and the total operating expenses \$221,000.

What is the amount of new bonds that can be issued?

9. A corporation has outstanding \$1,568,000 first mortgage 6% bonds. These were originally issued under an indenture that provided for the issue of additional bonds to pay for 80% of the cost of new construction, but only if the net earnings, after depreciation, for the preceding year were at least twice the interest charges on the bonds already issued and those to be issued.

On January 1, 1921, the following income and expense statement was presented to the board of directors covering the business of the preceding year.

Gross Receipts.....	\$608,731	
Cost of Operation Including Labor, Materials, and Small Repairs.....	\$285,760	
Maintenance of Plant, Structures, and Distributing System.....	98,623	
Taxes.....	24,201	
Depreciation.....	27,000	
Losses by Fire and Debts Charged Off.....	3,765	
Improvements and Extensions.....	68,300	
Interest Charges on Bonds.....	78,400	
Interest on Floating Debt.....	5,760	
Balance on Hand.....	16,922	
	<u>\$608,731</u>	<u>\$608,731</u>

How many new bonds, if any, can the board of directors authorize?

\*10. A corporation with the following balance sheet and income account proposes to issue some additional first and refunding mortgage bonds. It is provided in the indenture that additional bonds may be issued provided the total bonded debt is not greater than the capital stock; provided the net earnings are at least twice the total interest charges, including that of the bonds to be issued; and provided, finally, the par value of the new bonds be not greater than the capital expenditures. But it was provided in another connection that at least 10% of the total machinery accounts and 4% of the plant accounts must be expended or set aside out of earnings before betterments, replacements, or improvements can be properly charged to capital.

How many new bonds can the corporation issue?

**BALANCE SHEET**  
(Somewhat Simplified)

<i>Assets</i>		<i>Liabilities</i>	
Buildings and Structures.....	\$1,875,000	Common Stock.....	\$4,000,000
Machinery.....	4,658,000	Preferred Stock 7%.....	3,000,000
Inventories.....	6,783,000	First Mortgage 6% Bonds	1,500,000
Cash.....	285,000	Second Mortgage 5% Bonds.....	1,000,000
		First and Refunding Mortgage 5% Bonds...	1,360,000
		Notes, Bills, and Accounts Payable.....	1,568,000
		Surplus.....	1,173,000
	<u>\$13,601,000</u>		<u>\$13,601,000</u>

**Gross Income for the Year After Deducting Raw**

Materials, Labor, Salaries.....		\$3,023,000
Repairs and Maintenance.....	\$178,000	
Taxes, Partly Estimated.....	216,000	
Floating Debt Interest, Discounts.....	96,000	
Bonds Interest.....	208,000	
Insurance.....	21,000	
Losses on Inventory and Bad Debts.....	16,000	735,000
Net Income Before Depreciation or Dividends.....		<u>\$2,288,000</u>
Depreciation.....		103,000
Dividends, 7% on Both Classes.....		490,000
Betterments.....		784,000
Surplus.....		911,000



11. The treasurer of the Old Ladies' Home of Georgetown, Inc., died in 1919. His successor, Warren Taylor, Esq., was appointed in the spring of 1920. Mr. Taylor desired to obtain expert opinion concerning the investments held by the trustees of the Old Ladies' Home. Accordingly, he prepared a report of these investments with reference to:

1. The character of security (class of bond, preferred or common stock).
2. The type of enterprise.
3. Short, medium, or long term.

Below is given the list of securities. Prepare such a report as Mr. Taylor desired.

Atchison, Topeka and Santa Fé Railway General Mortgage 4's Gold, 1995  
 Great Falls Power Company First Mortgage 5's, 1940  
 Bethlehem Steel Company First and Refunding Mortgage 5's, 1942  
 United States Realty and Improvement Debenture 5's, 1924  
 Illinois Central Litchfield Division First Mortgage 3's, 1951  
 Erie Railroad Prior Lien 4's, 1996  
 American Telephone and Telegraph Company Collateral Trust 4's, 1929  
 Chicago Gas Light and Coke Company First Mortgage Guaranteed 5's, 1937  
 General Electric Company Debenture 3½'s, 1942  
 Illinois Central Railroad and Chicago, St. Louis and New Orleans, Joint, First and Refunding 5's, 1963  
 Baltimore and Ohio, Southwestern Division 3½'s, 1925  
 Adams Express Company Collateral Trust 4's, 1948  
 St. Louis and San Francisco Income Mortgage 6's, 1960  
 Kanawha and Michigan First Mortgage Guaranteed 4's, 1990  
 Manhattan Railway Second Mortgage 4's, 2013  
 Kansas City Terminal First Mortgage 4's, 1960  
 Tennessee Copper Company Convertible Debenture 6's, 1925  
 New York and Erie Railroad Fifth Mortgage 4's, 1928  
 Henderson Bridge Company First Mortgage 6's, 1931  
 Louisville and Nashville Secured Gold Notes 7's, 1930

12. On December 31, 1917, the San Antonio and Aransas Pass First Mortgage 4% bonds were outstanding to the amount of \$17,544,000. These bonds were guaranteed principal and interest by the Southern Pacific Company, which held \$404,000 in its treasury. For the year 1917 the following is the abbreviated operating account of the San Antonio and Aransas Pass Railroad.

Gross Earnings.....	\$4,178,191
Operating Expenses.....	3,517,594
Non-Operating Income.....	170,910
Taxes.....	195,103
Rentals.....	27,283
Interest on Equipment Obligations.....	14,500
Floating Debt Interest.....	232,978
Miscellaneous Expenses.....	1,707

To what extent was the railroad a source of direct profit or a direct burden to the Southern Pacific Company? Does this indicate that the road was necessarily a profitable or unprofitable subsidiary? Explain.

13. The Northern Maine and Penobscot Railroad acquires a collection of miscellaneous equipment at a total cost of \$2,000,000. It pays 10% of cost price at the time the equipment is delivered. The remainder is obtained through the issue of equipment trust certificates, bearing 5% interest, and maturing in equal semiannual instalments for a period of 10 years. The certificates were sold to bankers at 97½ less ½ point commission. The legal and other expenses attendant upon the issue amounted to \$3,800. These expenses, together with the discount, were amortized evenly over the life of the certificates.

What was the total charge, because of this equipment trust, during the eighth year after issue?

\* 14. The Wilkesboro and Southern Railroad has outstanding \$3,000,000 first mortgage 5% bonds, \$2,000,000 of preferred stock having non-cumulative 4% dividends, and \$2,000,000 common stock. Its first mortgage bonds sell for 103, its preferred stock for \$66 a share, and its common stock for \$48 a share. The earnings warrant a 2% dividend on the common stock; the market price has risen from \$13 a share to the present level during the last 15 months.

One million dollars is required for expansion. Bankers offer to buy at 90%, \$1,500,000, 20-year second mortgage 5% bonds, or at par \$1,500,000, 6% debenture bonds convertible into common stock on the basis of 80. The directors chose the latter alternative. In 3 years the common stock has risen to \$92 a share and all the convertible bonds have been converted. Meanwhile the dividend has been increased to 7%.

What is now the greater cost of capital of the second alternative over the first? Had the directors been able to forecast the movement of the common stock at the time the bonds were issued, should they have issued

the second mortgage bonds rather than the convertible debentures? Explain your answer.

15. A certain issue of 4% bonds of the Union Pacific Railroad was convertible in the common stock at a ratio of 175%. At one time the common stock was selling at 148 and paying 10%. The bonds were selling at 97. An investor placed \$9,700 in the bonds, with the intention of converting them into the stock when it was profitable so to do. Exactly 2 years later the stock, meanwhile paying the same rate of dividends, sold at \$175 a share. The investor converted.

How much more profitable would it have been for him to have bought the stock 2 years before? Do not consider interest on interest.

16. A certain issue of the 4% bonds of the Erie Railroad is convertible into the common stock at 60. The bonds are acquired at 47.

What is an equivalent, i.e., corresponding price for the common stock?

17. The  $4\frac{1}{2}\%$  bonds of the Baltimore and Ohio Railroad are convertible into the common stock at 110%. Ten thousand dollars par value of the bonds are purchased at  $82\frac{5}{8}\%$ , the speculator borrowing the money at 5% interest, interest payments being made semiannually. The bonds are held exactly 3 years, at which time they are converted. The common stock received is immediately sold at \$103 a share.

Compute the speculator's entire profit or loss.

18. A corporation known as the Gas Securities Corporation issued on March 10, 1913, some 6% 1-year notes at 98. Between March 10, and May 10, the notes could be converted into \$1,000 preferred stock and \$300 par value of common stock. Thereafter, on the tenth of each month, the amount of common stock to be received on conversion was reduced by \$10, par value, so that during the last month of the year the notes ran, only \$200 of the common stock was given. On August 18, 1913, the preferred stock had a value of \$78 a share and the common stock a value of \$8 a share.

Did it pay the purchaser of a note to convert?

#### Chapter IV— Preferred Stocks

19. The Turner-Jameson Company, Lynn, Massachusetts, manufacturers of ladies' fine shoes, decide to solicit capital from outside sources. Their balance sheet at the time stands as follows (the numbers represent even 000 and have been somewhat simplified):

<i>Assets</i>		<i>Liabilities</i>	
Upper Leather.....	\$161,000	Common Stock.....	\$200,000
Sole Leather and Findings	113,000	Essex County National	
Goods in Process.....	78,000	Bank of Lynn.....	50,000
Finished Goods and Goods		Miscellaneous Notes and	
Billed on Memorandum	93,000	Acceptances, discounted	
Machinery Owned.....	31,000	at Boston banks.....	87,000
Cash.....	17,000	Accounts Payable.....	103,000
		Surplus.....	53,000
	<u>\$493,000</u>		<u>\$493,000</u>

The business has been profitable, but the demand for ladies' fine shoes has dropped off of late. In consequence, the company has an abnormally large stock of leather and an abnormally large volume of outstanding notes and accounts. The bankers advise the sale of an amount of preferred stock equivalent to the common stock, and the use of the proceeds to pay off some of the bank and merchandise creditors. The treasurer of the company, pursuant to this advice, sells preferred stock to bankers at par less 10% discount.

Prepare the balance sheet after the whole transaction has been completed.

20. The Thomaston Water Company was organized in 1894. It then had a capitalization of \$300,000 common stock. In the course of time extensions were built and \$200,000 of 6 per cent cumulative preferred stock was issued and sold in 1907 to pay off the floating debt incurred. Beginning, however, in 1908, the company found itself forced to make still greater and more expensive improvements, and at the same time its usual facilities for borrowing were closed. Accordingly, the company paid only the preferred dividends due in 1908 and thereafter turned all earnings into new construction. In 1915 the company had finished its extensive improvements, was earning net over \$50,000 a year, and was in a position to resume preferred stock dividends. The directors offered to give the preferred stockholders new 5%, 20-year first mortgage bonds in lieu of their accumulated (unpaid dividends), adjusted as of January 1, 1916—the bonds to be taken at 88.

How large an issue was necessary?

\* 21. James Edgerly owned about four-fifths of the common stock of the Edgerly Manufacturing Company engaged in the manufacture of brass, bronze, and copper specialties. The company had been a success

for over 20 years, during which time Edgerly, himself, had been the executive manager for 18 years, or since the death of his father. On March 10, 1921, Edgerly committed suicide. A committee of the preferred stockholders, after careful study of the situation, decided to liquidate the business. They reported the balance sheet, as of March 1, 1921, as:

<i>Assets</i>		<i>Liabilities</i>	
Real Estate, Land, Cost	\$100,000	Capital Stock:	
Buildings.....	216,000	Common.....	\$500,000
Machinery.....	634,000	Preferred, 7%, Non-	
Small Tools and Miscel-		cumulative.....	750,000
laneous Equipment...	65,000	First Mortgage Bonds,	
Raw Material, Cost....	492,000	5%, Callable at 102½	300,000
Goods in Process.....	116,000	Notes Payable.....	216,000
Finished Goods, Unsold,		Accounts Payable.....	97,000
or Else Held for Can-		Surplus.....	193,000
celed Orders, Cost....	221,000		
Accounts Receivable...	79,000		
Notes Receivable.....	111,000		
Cash.....	22,000		
	<u>\$2,056,000</u>		<u>\$2,056,000</u>

The land on which the factory building stands is sold for about 28% above the cost, but the building itself will have to be torn down and will yield nothing to the shareholders. The machinery has for years been carried on the books at cost, without depreciation. It is sold for junk at a price of about \$40,000. About \$10,000 is realized from the sale of the small tools.

The crisis in the affairs of the company was brought about by the sudden decline in the price of raw material. About 46% of cost is realized on the raw material account. The goods in process are finished at an expense of \$15,000, after which they are sold for about \$33,000. The finished goods, being mostly unmarketable specialties, realize only about 20% of the cost. A loss of 12% is taken on the open accounts. The notes receivable are all indorsed by a commission house, which acquires them immediately at a discount of 2%. In the liquidation of the company the preferred stock has priority over the common.

What will the holder of one preferred share receive as a liquidating dividend?

96.17

**\*\* 22.** (This problem involves some knowledge of accounting.)

The City Manufacturing Corporation had outstanding, January 1, 1919, \$3,000,000 common stock and \$3,000,000, 7% cumulative preferred stock upon which there had accumulated 63% of unpaid dividends. But during 1919 the corporation, by reason of war conditions, had accumulated a profit and loss surplus, after payment of and reserves for taxes, of \$3,763,000. The corporation had no bonded debt. Of this surplus all but \$27,300, carried as cash, had been invested in extensions of plant or in increased net assets. To reduce the current assets would disturb the pleasant relations with creditors, and the directors were opposed to increasing the current borrowings at the banks. They wished to declare a 3% dividend on the common stock, which would involve the payment of the accumulated dividends on the preferred. To accomplish this end the preferred stockholders were offered—and the latter accepted—a cash dividend of 23% and the remainder in 6% first mortgage bonds taken at par. To carry out the plan the corporation issued \$3,000,000, 10-year first mortgage 6% bonds; all not taken by the preferred shareholders were sold to bankers at 90.

Prepare a balance sheet of the City Manufacturing Corporation as of January 1, 1919, creating for the purpose reasonable entries for items not specifically mentioned in the problem. Then, using the same balance sheet as a basis, show the balance sheet of the corporation after the dividends on the two classes of stocks have been paid.

### Chapter V—The Promoter and Banker

**23.** Amos Jenkins brought to Edward Riley and Company, investment bankers, the proposition of financing a new shoe factory, of which Jenkins was to act as general manager having executive charge of the new business. Edward Riley and Company obtained a report on Jenkins from a mercantile agency, as a preliminary step. The report stated that Jenkins was a very able shoe manufacturer, particularly skilful in the purchase of raw materials. He had been accused by one employer of securing secret rebates from a large leather house and had immediately withdrawn without attempting to disprove the accusation. He had been refused by the First National Bank a line of credit in case he should build a shoe factory of his own. He had been sued by his father-in-law for converting to his own use—for margins on stock exchange transactions—12 bonds owned by his sister-in-law. The case had been settled out of court. He had a "poor pay" reputation for meeting his small living bills. Edward Riley and Company were convinced that the project was sound economically.

How could they safeguard themselves against such a man as the mercantile agency described?

24. Alonzo Emerson and Company, a small investment banking house of Dover, New Hampshire, arranged with Edward Sparrow, a promoter, to promote jointly the Dover Shoe Company. Sparrow was to start the business and sell at least \$50,000 of preferred stock with a bonus of 100% of common stock. The Emerson firm was to sell \$200,000 preferred stock with the same bonus. Each party was to receive a commission of 10% on all the preferred stock sold, to be paid in common stock. Peter Andrews and James Tompkins Smith, prominent citizens of Dover, the former the president of the leading bank and the latter the state Senator for Rockingham County, were each to receive \$25,000 in common stock. They, in consideration of this, were to speak well of and to recommend the new enterprise to prospective investors. The balance, if any, of common stock was to be divided between Alonzo Emerson and Company and Sparrow in the ratio of three shares to the former and one share to the latter. The promotion was an immediate success and the Emerson firm sold their proportion of \$200,000 prepared stock in a week. Sparrow then sold his allotment of \$50,000 of preferred, giving only 50% bonus with the first half and no bonus with the last half. A half-million dollars, par value, of common stock was issued.

How much went to Alonzo Emerson and Company, and how much to Sparrow?

25. James Ellis and Company, established investment bankers of Philadelphia, wish to compute their profit or loss in handling \$1,000,000 par value of the first mortgage 5% bonds of the Kenyon County Electric Company. The following facts are available:

Before purchasing, the buying department reported the following expenses:

Lawyers' Fees.....	\$1,600
Accountants' Fees.....	900
Engineers' Fees.....	2,700
Traveling and Other Expenses.....	1,180
Clerk Hire and Other General Expenses to be Allocated to this Purchase.....	518

The bonds were purchased at 88. They were sold by the selling department to the public at 93. The salesmen of the house devoted themselves exclusively to the issue for one week, put about half their time upon it for 2 weeks, at the end of which time the issue was entirely sold.

The sales manager received a salary of \$10,000 a year.

Each salesman received a commission of  $1\frac{1}{2}$  points on every bond sold and an extra bonus of \$1,000 to be divided evenly among them in case a new issue should be entirely disposed of within one month of its initial offering. The direct selling expenses to be specifically allocated to this issue were:

Printing.....	\$346
Postage.....	186
Clerk Hire.....	72

The general "overhead" of the selling department amounted to \$4,760 a year. The firm set aside  $\frac{1}{8}$  of 1% on the issue to maintain a market of 91-93 to its customers.

What was Ellis and Company's profit or loss?

## Chapter VI—The Promotion of New Enterprises

26. A man by the name of Watkins invented a small device to be carried in the pocket for sharpening pencils. It could be manufactured for 6 cents, if ordered in lots of 1,000. The inventor wanted a half-interest in the business, and would surrender the other half in return for sufficient capital to exploit the patent. There were no orders in sight and the inventor had no idea how to market his invention. A private brass manufacturer became interested in the invention and offered to furnish \$5,000 capital at the outset, and \$10,000 more within a year, provided the initial sales indicated that the public would buy the device.

Prepare a plan for the promotion of the "Little Wonder Pencil Sharpener Company."

27. An inventor has secured patents on a lens consisting of a series of glass prisms, for throwing the light from automobile headlights downward. The headlights of machines equipped with the device conform with certain state laws. A promoter is about to organize a company, for the exploitation of the device. He has contracted to pay the inventor \$10,000 in cash for the patent rights which are to be assigned to the new company subject to the lien of the purchase money. \$5,000 is to be paid within 60 days and the balance within 90 days.

The glass for the lens can be purchased from a Pennsylvania glass works for 11 cents a pair. The promoter has leased a small shop for assembling and packing the device at \$100 a month, which includes power and heat. The labor and other costs will be 26 cents on an output of



500 a week and 18 cents or less on an output of over 1,000 per week. An automobile accessory jobbing house has signed a contract to purchase 300 pairs of lenses a week at 85 cents for one year, provided the company expend \$10,000 in advertising during the first year. To equip the assembling plant \$6,000 is required. The promoter, on behalf of the new company, has agreed with the accessory jobbing house that the lenses will be sold to garages for \$1.25 a pair, less 2% cash, and that the retail selling price will be fixed at \$2. The promoter plans to allow salesmen a gross commission of 20% on all sales to garages. A revolving fund of \$10,000 is required to place salesmen on the road. For organization expenses \$1,000 is required.

Prepare a financial plan for the promotion.

28. Frederick Holzsmidt came to this country as a penniless German-Jew immigrant. He became the ticket-seller at an amusement pavilion at Coney Island. In three years he had acquired a fifth interest in the enterprise; then followed two prosperous years, at the end of which he had saved \$3,000. He then paid his entire savings for the other four-fifths interest and became the sole owner. The next summer, that of 1913, was cold, rainy, and discouraging. He lost heavily on his operating expenses. The building had an insurance of \$5,000 upon it, and on the 8th of September it caught fire during the early morning hours when no one was supposed to be about. Ultimately Holzsmidt collected his insurance money.

He then asked Heinrich and Company of Wall Street to help him promote a new amusement feature to be known as "Fly-de-coop." The patrons thereof for the small sum of 10 cents were given a ride in a specially prepared car which descended with increasing velocity a long inclined plane and then shot across a stream of water onto a level plane beyond. It would cost \$47,500 to build the feature; the maintenance cost would be small and the profits large. Holzsmidt offered to contribute his only capital, \$5,000, and wanted Heinrich and Company to provide \$50,000, making \$55,000 in all. This would build the "feature" and operate it for the first season. Describe, in detail, all the information, under appropriate headings, and all the kinds of figures, which Heinrich and Company should have at their command in reaching a decision whether or not to undertake the promotion.

#### Chapter VII—The Promotion of New Companies in Established Fields

29. The board of trade of a medium-size city in western Pennsylvania wished to attract an industry to the city that employed female labor. There were large steel mills that gave employment to men.

A silk manufacturer, Engalls by name, entered into correspondence with the secretary of the board of trade with a view of erecting a silk mill. The board of trade offered to secure exemption from taxation for a period of 6 years, to donate a factory site of 4 acres, and to secure subscriptions to \$100,000 of the preferred stock of the silk mill, provided the total issue of preferred stock did not exceed one-half the total cost of the mill and the net quick assets. The mill, built and equipped, would cost \$500,000. At least \$200,000 of net quick assets would be required.

Prepare a financial plan such that the promoter may accept the subscriptions of the board of trade and also receive outside capital from investors and banks.

30. A small shoe factory, located at Lynn, Massachusetts, manufacturing medium-grade McKay sewed ladies' shoes has been quite successful. The present owner, Jeremiah Johnson by name, began with a small capital, only \$11,400 at the start of the enterprise 2 years before. He has drawn out of the business only \$2,300 for his own account during the 2 years.

At the time in question auditors report the following situation: The business is conducted in an old wooden building for the use of which the proprietor pays \$100 a month. \$2,730 has been invested in shoe machinery and \$3,010 in power transmission machinery and equipment. The rest of the machinery is under lease from the United Shoe Machinery Company. The business has leather, findings, goods in process, and finished goods under order, subject to cancellation, of \$52,640. It has accounts receivable of \$39,640, on which it has borrowed up to 70%. It has discounted customers' notes to the amount of \$17,300. It has cash of \$2,780 and owes merchandise creditors \$31,810 and banks \$8,500 on its own paper.

Johnson is an able manager. One of the banks, with whom he has dealings, has introduced him to a capitalist who is willing to put \$50,000 into his business, provided it be incorporated.

Prepare a financial plan fair to both Johnson and the capitalist.

31. Jones, Smith and Brown, small manufacturing jewelers at Attleboro, Massachusetts, propose to consolidate their businesses, as of January, 1921.

Jones conducts his business in the top story of a brick building. He has \$4,700 of material and manufactured goods. He is old and wishes to retire. He owes nothing, and has done business entirely with a certain jobbing house which has paid him cash on delivery, so that he has no outstanding accounts. He is willing to take stock in the new company, provided it involves no responsibility and has a maximum of safety.

Smith is a young man, ambitious and thought well of by the banks. He does a mail-order business with department and mail-order houses mostly outside of New England. Last year his total gross sales amounted to \$128,000, of which \$16,400 remain as net profits after the payment of all overhead expenses and the setting aside of reasonable reserves. On January 1, 1921, he is carrying a stock of materials and goods amounting to \$21,380 and has \$14,728 in accounts receivable. He owes one bank \$1,000 on \$1,500 of Liberty bonds borrowed from his sister. He has a cash balance in another bank of \$2,980. He has no merchandise debts.

Brown has an old-established specialty business for the manufacture of gold-washed chains. He wants to be relieved of responsibility, but does not want to retire. In brief his balance sheet is:

<i>Assets</i>		<i>Liabilities</i>	
Plant, a Small Modern		Bank Loans.....	\$ 7,200
Brick Building.....	\$12,000	Surplus.....	33,800
Machinery.....	7,000		
Material and Finished Goods	8,000		
Accounts.....	11,000		
Cash.....	3,000		
	<u>\$41,000</u>		<u>\$41,000</u>

He made \$27,000 the year before; \$20,000 he drew out.

Prepare a plan of consolidation.

32. Three small tanneries located in Peabody, Massachusetts, each made a great deal of money during the Great War. This was withdrawn by the proprietors at the end of each year. But on January 1, 1921, each of the proprietors found that he had sustained considerable losses during the preceding year. These losses were due to the rapid decrease in the demand for upper leathers and to the very rapid decline in the market of hides and leather. This fact of the severe losses was not generally known, although the bank from which one of the tanners had increased his borrowings during the latter part of the year had asked to have the books of the tannery audited—a request never before made.

The following represented the balance sheets (made uniform for purposes of comparison) of the 3 tanneries as of January 1, 1920, and January 1, 1921 (even 000):

## AMOS SAMPSON

(Established 1890)

<i>Assets</i>			<i>Liabilities</i>		
	1920	1921		1920	1921
Buildings.....	\$100,000	\$100,000	Accounts Pay-		
Machinery....	65,000	60,000	able.....	\$172,000	\$ 97,000
Hides, Current			Notes Payable.	250,000	293,000
Market.....	174,000	84,000	Surplus.....	94,000	
Hides in Proc-					
ess.....	29,000	3,000			
Finished Leather	3,000	27,000			
Notes and Ac-					
counts Re-					
ceivable....	110,000	92,000			
Cash.....	35,000	6,000			
Deficit.....		18,000			
	<u>\$516,000</u>	<u>\$390,000</u>		<u>\$516,000</u>	<u>\$390,000</u>

## EDWARD DEXTER AND COMPANY

(Established 1856)

<i>Assets</i>			<i>Liabilities</i>		
	1920	1921		1920	1921
Buildings.....	\$55,000	\$55,000	Capital Stock..	\$50,000	\$50,000
Machinery....	72,000	70,000	Accounts Pay-		
Hides, Market			able.....	82,000	52,000
Value.....	92,000	21,000	Notes Payable.	140,000	120,000
Hides in Proc-			Surplus.....	83,000	18,000
ess.....	32,000	13,000			
Finished Leather	26,000	39,000			
Notes and Ac-					
counts Re-					
ceivable....	71,000	33,000			
Cash.....	7,000	9,000			
	<u>\$355,000</u>	<u>\$240,000</u>		<u>\$355,000</u>	<u>\$240,000</u>

## TYLER AND SMALL

(Established 1900)

<i>Assets</i>			<i>Liabilities</i>		
	1920	1921		1920	1921
Buildings.....	\$ 200,000	\$200,000	Capital Stock..	\$ 500,000	\$500,000
Machinery.....	318,000	302,000	Accounts Pay-		
Hides, Market			able.....	165,000	216,000
Value.....	178,000	98,000	Notes Payable..	340,000	200,000
Hides in Proc-			Surplus.....	8,000	
ess.....	71,000	4,000			
Finished Leather	83,000	101,000			
Notes and Ac-					
counts Re-					
ceivable.....	147,000	111,000			
Cash.....	16,000	23,000			
Deficit.....		77,000			
	<u>\$1,013,000</u>	<u>\$916,000</u>		<u>\$1,013,000</u>	<u>\$916,000</u>

Sampson has offered to turn over his business with its going organization, to the other proprietors, provided they assume his liabilities. The assets, as of January 1, 1921, for all the tanneries have been marked down to the low current market values. The replacement cost, less depreciation, for the buildings and machinery accounts of all 3 tanneries is at least 50% above the amounts at which they are carried. There are approximately \$200,000 of accounts payable of the 3 together that must be paid within the next 3 months; the rest of the accounts will be carried. The bank loans will have to be reduced by at least \$250,000 or else some arrangement made with the banks for funding a portion of the debt. Fully 80% of the receivables are represented by shoe paper which is likely to be slow.

Prepare a plan for the promotion of a new corporation to absorb the 3 tanneries and rehabilitate their weakened credit.

## Chapter VIII—Railroads and Construction Companies

33. James M. Sturgis, country-side physician and proprietor of the Keswick Kennels—"line-bred" English sheep-dogs—was an influential person of Wilton, New Hampshire. He proposed that the citizens of the town should build a new railroad which should connect Wilton directly with Fitchburg, Massachusetts, a distance of only 15 or 20 miles. Sturgis believed that his new railroad, the Fitchburg and Wilton, would be able to

make advantageous traffic agreements with several railroads serving Fitchburg, and the people of Wilton would be able to enjoy the benefits of railroad competition. Sturgis himself subscribed \$25,000 to the \$380,000 necessary to build the line. He obtained subscriptions of \$50,000 each from four separate "chief citizens" of Wilton, and smaller subscriptions of varying amounts to the remainder.

Prepare a financial plan for the new Fitchburg and Wilton Railroad.

\* 34. A certain region is served only by one of the 3 great north-south railway systems of the South. The cotton planters wanted to introduce competition. Accordingly one of them went to the chairman of the board of directors of another of the large systems known as the Northern Railway, and suggested that he build a branch line into the region. For various reasons it was impractical for the Northern Railway to enter the competitive field. Nevertheless the chairman of the Northern Railway offered to use his best efforts to assist the planters to build a line of their own from Geraky, the junction point on the Northern Railway. He made the following offer:

The Northern Railway would execute a traffic agreement with the new road, which will be called hereafter the Georgia Southern Railway, for an interchange of traffic by which the Georgia Southern would receive 40% on all traffic from stations on its line, the latter agreeing to deliver all traffic for points beyond to the Northern Railway at Geraky. On his return the planter ascertained the following facts: The branch line would be approximately 96 miles in length. It would reach one city, Sanderson by name, of 9,000 inhabitants. The gross freight charges on all the cotton shipped out of a belt extending 10 miles on either side of the proposed road amounted during the previous year to \$516,000. The freight receipts from other shipments amounted to \$187,000. Owing to the feeling against the other road it was believed that the Georgia Southern would obtain at least  $\frac{2}{3}$  of all the outgoing shipments from the region.

Planters along the proposed line offered to donate the right of way without charge. Land for a yard in Sanderson would cost \$1,700. The board of trade of the city, however, agreed to secure subscriptions to the new road amounting to at least \$80,000 in money, to be invested in the securities of the new road. Cotton planters along the line and merchants in the hamlets traversed agreed to provide at least \$136,000 under the same conditions. The chief engineer of the Northern Railway, who had been delegated by the chairman to consult with the planters, estimated that the road could be graded for \$54,000 and that the labor in laying the track, sidings,

and yards would amount to \$116,000, provided the planters would agree to provide sufficient laborers at the then prevailing wages. He had been authorized by the superintendent of ways and structures, with the approval of the chairman of the Northern Railway, to offer to sell the planters 70-pound relay rails at \$16.80 per ton and to provide second-hand cross ties at 27 cents a piece. The station, warehouse, and freight house at Sanderson would cost \$62,000. Stations at the hamlets would cost \$41,000. Switching facilities at Geraky would be provided by the Northern Railway; switches, signals, frogs, plates, spikes, etc., would cost \$11,000. Options on 2 second-hand locomotives were obtained for \$19,500 each; also 4 second-hand passenger cars at \$3,200. The chief engineer of the Northern Railway offered to put the cars in good working condition for \$1,500. Freight cars and other equipment would be rented. Incidentals, not specifically mentioned, were estimated to reach not over \$50,000.

Prepare a plan for the promotion of the Georgia Southern Railway.

### Chapter IX—The Promotion of Public Utilities

35. Certain citizens of the small town of Dublin in South Carolina decide to organize a private water company. The land about a small lake 6 miles above Dublin is acquired at a cost of \$11,000. From this lake, water is to be distributed to the town by gravity. A contractor in Charleston offers to put in the water system, including 21 fire hydrants, for \$130,000. This does not include the consumers' services. The town agrees to pay \$100 a year for each fire hydrant rental. Eight hundred men agree to connect their houses and purchase water of the company at an average yearly rate of \$12.50. One factory will be supplied with water on an annual rate of \$700. Engineers estimate the annual operating expenses, including repairs, at \$2,900 and depreciation at \$2,700. The citizens will subscribe to the stock of the company up to \$60,000.

Prepare a financial plan on the basis of which investment bankers in Richmond will care to take over the promotion of the company.

36. A gas engineer bought a summer home in the outskirts of a small city in New Hampshire. He became interested in promoting a company to supply gas, and solicited help from the local board of trade. The gas house, including a U. G. I. set, purifiers, etc., would cost \$21,000. The laying of the mains would average about \$1 a foot. It was planned to lay only 6 miles of main to start with, on which there were promises of 618 services. The gas holders and miscellaneous expenses would amount to \$11,000. It would cost for coal (less by-products), oil, and labor about 85 cents a

thousand feet of gas, delivered at the holder. The customers would average a consumption of about 22,000 feet of gas, each, per year. The price to the consumer would be \$1.65 per thousand feet. The depreciation would be \$2,000 a year. Office expenses would amount to \$900. A working manager's salary would be \$1,800 a year, and the miscellaneous expenses \$900. Repairs to mains and general maintenance of the distributing system would amount to approximately \$1,300. The promoter agreed to remain as consulting engineer provided he be given a majority of the common stock of the new company, all the money for which was to be raised by public subscription and to be represented by securities, superior in lien on assets and earnings, to the common stock.

Prepare a financial plan of the promotion.

37. Bates and Company propose one of 2 financial plans to a promoter of an electric power development. Which is preferable from the point of view of the promoter? Which from the point of view of the permanent welfare of the enterprise?

Total amount of money to be raised, \$2,000,000.

#### Plan A

Bonds, 30-year 6%.....	\$1,600,000
Preferred Stock, 7%.....	800,000
Common Stock.....	3,000,000

The bankers will purchase the securities in blocks

\$1,000 in Bonds	} for \$1,250
500 in Preferred Stock	
750 in Common Stock	

Of the \$1,800,000 par value of common stock remaining the promoter will take half and the bankers half.

#### Plan B

Bonds, 30-year 7%..	\$1,200,000	bought by bankers at 90.....	\$1,080,000
Preferred Stock 8%.	1,000,000	bought by bankers at 70.....	700,000
Common Stock.....	4,000,000	of which \$2,200,000 is bought by bankers at \$10 a share....	220,000

The remainder of this goes to the promoter.

\* 38. A promoter-engineer in Philadelphia heard of an electric situation in West Virginia which the owner had offered to sell. He investigated it and found the following facts:



There was an old steam plant, so antiquated and inefficient that, in spite of the fact that coal was costing only \$1.45 a ton at the plant, the generated current was costing the company 4.62 cents per k.w.h. at the switchboard. The annual output was about 780,000 k.w.h., with a very poor load factor. The entire plant would have to be dismantled and a new plant built at another site. This would cost at least \$130,000, provided the plant was constructed so as to be efficient for the present business and to allow for the available new business. There was one factory operating on a 9-hour shift, and 2 mills both operating on 2 12-hour shifts. These 3 agreed to buy their power of the company, provided the cost would not exceed 2.5 cents per k.w.h. and provided the company, through the construction of a new plant, would place itself in readiness to furnish adequate and dependable service.

Owing to the efficiency of the new plant, and provided the 3 large customers were connected, the total annual output would be increased to approximately 1,200,000 k.w.h., and the load factor much improved. Under these conditions the switchboard cost could be reduced to 2.2 cents, provided coal remained at the same price. This estimate was based on the sale of 360,000 k.w.h. to the 3 large new customers at 2.5 cents and an increase in the ordinary business of  $7\frac{1}{2}\%$  k.w.h. output. Parts of the distributing system would have to be immediately rebuilt at a cost of \$32,000. The financial statement for the preceding year was as follows:

Gross Earnings, less Discounts.....	\$56,374
Operating Expenses, Including Salaries, Maintenance, and Repairs (no depreciation reserves had been set aside for at least 5 years).....	44,719
Taxes.....	518
Net Earnings.....	11,137

The owner required \$225,000 for the property, for which price he agreed to deliver the rights, franchises, and physical property free from debts.

The future possibilities of the city and its prospective industrial importance was such that the promoter remarked to friends that he would have paid the price for the "situation" or the mere right to do business, even if there were no established plant and business. He had no money of his own.

Prepare a financial plan by which outside investment bankers could undertake to supply the money requisite for the promotion.

(The comment and solution of the following problem is given for illustrative purposes. Attention of the students should be drawn especially to the difference between the financial plan of the Arrabassett Power Company and that of a small industrial such as that represented by the first three or four problems of the book.)

39. In 1912 James Stetson, an electrical engineer, developed a water power on the Arrabassett River  $14\frac{1}{2}$  miles above Galesboro, a city of 27,000 inhabitants. He acquired, for a cash payment of \$316,000, the local distributing system of Galesboro. The hydroelectric development alone cost \$617,000 and the transmission line, substation to Galesboro, \$46,000. This total money cost was met by advances from a syndicate headed by William Sampson and Company, under an agreement by which the Sampson firm obligated themselves to sell bonds and preferred stock of the enterprise (after it had been in operation a year) so as to yield enough money to reimburse the syndicate for its cash advances together with 6% interest and 2% commission. The common stock was to be divided so that  $\frac{1}{3}$  went to Stetson,  $\frac{1}{3}$  to William Sampson and Company, and  $\frac{1}{3}$  to the individual underwriters. The Sampson firm were underwriting members of their syndicate to the extent of a  $\frac{1}{10}$  interest. The developments and physical connection with Galesboro were completed November 8, 1912. The calendar year of 1913 showed the following earning statement of the hydroelectric development and the distributing system at Galesboro.

Gross Earnings.....	\$339,000
Operating Expenses (including taxes).....	162,000
	<hr/>
	\$177,000

On the basis of this showing the Galesboro Electric Power Company was organized with the following capitalization:

First Mortgage 30-year, Sinking Fund 5% Bonds (closed issue, callable at 105).....	\$1,000,000
6% Preferred Stock (\$500,000 authorized) Issued.....	250,000
Common Stock.....	1,500,000

William Sampson and Company sold the entire issue of bonds to M. U. Harlow and Company for  $88\frac{1}{2}$ , who retailed them to investors for  $93\frac{1}{2}$ . They sold the issue of preferred stock to a group of 6 small banking houses for 90, who, in turn, sold the stock to small investors for  $98\frac{1}{2}$ . The two issues, therefore, netted the company \$1,110,000. The entire advances of the syndicate, including interest, expenses, and commissions amounted to

\$1,082,000. The balance of \$28,000 was returned to the company's treasury; the common stock was distributed in accordance with the original syndicate agreement.

The business prospered. In the early spring of 1916, Stetson acquired options on the distributing systems in 6 neighboring towns and cities, with the intention of promoting a large operating company deriving its power from an enlargement of the original Arrabassett development. Four of these towns lay within 4 miles of the power station of Galesboro; the two cities were on opposite sides of a river 26 miles away, in the opposite direction from Galesboro.

The following few facts are pertinent:

Stetson estimates that improvements at the power-station, in order to furnish ample power, will require \$280,000. A new transmission line to Sumpter and Fort Riley will cost, with substation, \$118,000. Subordinate lines from the power-station or from points on the Galesboro line to reach the four small towns will cost \$18,000. As soon as the connections are completed from the 6 new towns and cities with the power-house the previous operating ratio will be cut 12% immediately. This will, however, entail an additional expense of \$400 in the operation of the power-house, the costs of which are included in the statement of the Galesboro Electric Power Company. It will require until September 1, 1916, to complete the improvements at the power development and to build the necessary connecting lines.

Stetson further estimates that if the expenditures on the respective distributing systems for the 6 new towns and cities are made, there will be an increase of at least \$42,000 in gross earnings during the year immediately following the improvements. Furthermore, when there has been this increase in gross revenue the composite operating ratio, including Galesboro, should show a further decline of 2%. Without expenditure for important betterments, Galesboro will show a rate of increase of gross of about the average for the last 3 years. Certain important facts pertaining to these properties are given on the next two pages.

Prepare a financial plan for the promotion of the Arrabassett Power Company which shall bring together the seven properties.

#### COMMENT AND SOLUTION

General Comment. An inspection of the data of the problem shows the following important pertinent facts:

1. Control. (a) Through the distribution of the common stock of the Galesboro Electric Power Company, Stetson receives \$500,000, or a third,

	GALESBORO ELECTRIC POWER COMPANY	GARDNER ELECTRIC COMPANY	BELGRADE ELECTRIC LIGHT COMPANY	CLIFTON ELECTRIC COMPANY	BOXBORO ELECTRIC COMPANY	SUMPTER ELECTRIC LIGHT COMPANY	FORT RILEY
Population Served....	30,000	4,000	1,000	3,500	900	16,000	12,000
Number of Meters....	2,817	160	85	287	46	982	312
Condition of Distrib- uting System.....	Good	Bad	Good	Fair	Poor	Fair	Poor
Amount to be Spent Immediately for							
Betterments.....	None	\$28,000	\$2,000	\$16,000	\$21,000	\$38,000	\$52,000
Load Factor.....	Good	Poor	Poor	Poor	Poor, Twi- light to Midnight	Fair	Poor
Local Management....	Good	Inefficient	Fair	Good	Poor	Fair	Poor
Nature of Population.	Small Industries	Farming Center	Village with Creamery	County Seat, Retired Farmers	Country Village	County Seat Manufac- turing	Wood Work- ing Indus- try

OPERATING DATA: (EVEN 000)	GALESBORO	GARDNER	BELGRADE	CLIFTON	BOXBORO	SUMPTER	FORT RILEY
Gross Earnings Aver- age 3 Preceding Years.....	\$ 352,800	\$ 31,300	\$ 11,600	\$ 46,400	\$ 4,700	\$116,300	\$ 37,000
Year 1915.....	364,600	32,700	12,900	48,100	4,100	121,500	31,900
Net after Taxes Aver- age 3 Years.....	189,300	9,300	4,700	20,300	1,200	39,100	7,600
Year 1915.....	197,900	9,100	4,800	23,000	900	42,700	2,800
CAPITALIZATION:							
Bonds.....	\$1,000,000 (5's)	\$200,000 (5's)	\$ 92,000 (4's)	\$250,000 (5's)	.....	\$500,000 (4's)	\$100,000 (5's)
Preferred Stock.....	400,000 (6%)	.....	.....	100,000 (6%)	.....	.....	.....
Common Stock.....	1,500,000	200,000	100,000	100,000	81,000	500,000	300,000
Option Price.....	.....	Bonds at 61% and stock thrown in	\$8 a share for all of com- mon stock	\$71 a share for the preferred stock; \$31 a share for com- mon	\$15,000 for property free from debts	\$20 a share for the stock	In hands of re- ceiver. Total cost about \$37,000

William Sampson and Company receives \$700,000. The two interests, together, therefore, control the equity of this property. (b) The control of the new Arrabassett Power Company will rest with the same interests as the Galesboro Electric Power Company; the latter will form the nucleus of the new power company.

2. Past earnings. Considering the available data, the aggregate earnings of the 7 properties to be combined are:

	Average of Preceding 3 Years	Preceding Year (1915)
Gross Earnings..	\$600,100	\$615,800
Net Earnings. . .	271,500	281,200

3. Money requirements. Since Stetson and the Sampson firm control most of the common stock of the Galesboro Electric Power Company, the problem will be to finance the purchase of the other 6 properties. This will require at a minimum \$384,000 in money. This leaves outstanding \$842,000 par value of bonds, not considering the Galesboro securities.

In addition \$416,000 will be required before September 1, 1916, for making the connections. Likewise, \$157,000 must be spent immediately for improvements in the 6 towns. In case the promotion should be planned so as to extinguish or refund the underlying bonds, cash would have to be provided in addition for the acquisition of \$1,000,000 Galesboro bonds and \$842,000 of bonds of other corporations.

4. Future earnings. On the presumption of the general accuracy of the estimates we may infer the following facts:

- (a) The operating ratio of the 6 towns (not including Galesboro) in 1915 was 67%. Connections with the Galesboro power-house will reduce this to 55%. These connections will be finished September 1, 1916. They will entail an increase of \$400 in the Galesboro operating expenses.
- (b) The first full year for which the estimates are applicable is the year September 1, 1916, to September 1, 1917.
- (c) There will be an increase of \$42,000 in the gross earnings of the 6 towns (not including Galesboro) for the year September 1, 1916, to September 1, 1917.
- (d) The rate of increase of gross for Galesboro alone will be continued through the year ending September 1, 1917. This rate of increase is to be computed as follows:

Gross for Galesboro Calendar Year 1913.....	\$339,000
Gross for Galesboro     "     "     1914.....	354,800 <sup>1</sup>
Gross for Galesboro     "     "     1915.....	364,600
Rate of Increase 1914 over 1913.....	\$15,800 or 4.7%
"     "     "     1915     "     1914.....	9,800 or 2.8%
Average Rate of Increase.....	3.7%

During the calendar year 1916, Galesboro would have a gross of approximately \$378,100. During the calendar year 1917, the gross earnings would be \$392,100. By dead reckoning the gross earnings for the year from September 1, 1916, to September 1, 1917, would be roughly \$387,400.

- (e) The operating ratio for Galesboro alone would remain constant, except that the operating expenses would be increased by \$400 due to the expansion.
- (f) The operating ratio for the entire properties, all seven, will be decreased by 2%.

On the basis of these facts we may proceed to estimate the gross and net earnings of the entire promotion for the year ending September 1, 1917, as follows:

Gross	
Galesboro.....	\$387,400
Six Towns.....	293,200
Total.....	<u>\$680,600</u>

The estimate of the operating expenses and net earnings is much more complicated. The problem is not clear as to whether the reduction of 12% in the operating ratio for the 6 towns applies before there has been an increase of \$42,000 due to internal improvements, or after. The problem seems to imply that this reduction is quite independent of the reduction of 2% in operating ratio for the entire properties following the total increase of gross earnings. We will assume that the internal improvements are all made before September 1, 1916, since the wording is "amount to be spent immediately for betterments." Consequently the operating expenses for the 6 towns alone would, for the year from September 1, 1916, to September 1, 1917, be 55% of \$293,200 (\$251,200 gross for 1915 plus \$42,000 additional due to internal betterments), or approximately \$161,300. This

<sup>1</sup> Computed as follows: Let x represent 1914.  $\frac{\$339,000 + x + 364,600}{3} = \$352,800.$

leaves net earnings of \$131,900 for the 6 towns alone, for the year in question.

The operating ratio for Galesboro for 1915 was 46% approximately. The operating expenses for the year from September 1, 1916, to September 1, 1917, would be \$178,200—without considering the additional \$400. This would increase the operating expenses to \$179,600. It would leave net earnings for Galesboro of \$210,100. Putting these figures together (and still omitting from consideration the general reduction of 2% in operating expenses) we have:

	Gross	Operating Expenses	Net
Galesboro.....	\$387,400	\$178,600	\$208,800
Six Towns.....	293,200	161,300	131,900
Totals.....	<u>\$680,600</u>	<u>\$339,900</u>	<u>\$340,700</u>

This represents an operating ratio of 50%. There will be a reduction of 2% for the entire consolidated property—48%. This will bring about the following estimated statement of the entire consolidation for the year from September 1, 1916, to September 1, 1917:

Gross Earnings.....	\$680,600
Operating Expenses.....	<u>326,700</u>
Net Earnings .....	<u>\$353,900</u>

We may now proceed to the discussion of the financial plan of the new consolidation. The bankers have before them 3 possible general plans, subject to almost an infinite number of modifications.

1. Advance, either themselves or through a syndicate, enough money to carry out the promotion. Hold the securities until the estimated earnings are actually realized.
2. Pay off all the bonds and create an entirely new financial plan. Enough of these new securities would then be sold to furnish the money to pay the bonds and make the improvements.
3. Form a holding company which would own only the equities in the 7 subsidiaries. All the underlying bonds, so far as possible, and the preferred stock of the Galesboro Electric Power Company would remain outstanding. Holding company bonds and stocks would be sold to obtain money for the minimum cash requirements.

A comparison of these general plans shows that the first involves the greatest risk to the bankers. It would bring, however, in case the esti-



mated earnings were actually realized, the bankers and presumably the promoter, the greatest profit. The second plan would involve the largest immediate cash requirement, the third plan the least cash requirement.

The spring of 1916 afforded an excellent market for securities. High-grade public utility bonds commanded a 4.80% market, good grade a 5.10% market, medium grade a 5.45% market. Bankers would recognize this. They would wish to take advantage of it. They would therefore discard the first plan of a carrying syndicate.

The execution of either of the second plans would involve the immediate sale of securities. These securities would be sold on the basis of past earnings and future prospects. Let us consider exactly what is the outlook for new securities on the basis of past earnings only.

Provided the Galesboro, Belgrade, Clifton, and Sumpter bonds are not paid or refunded, they will require a fixed charge of \$86,180 a year, to which must be added the preferred stock dividend on the Galesboro, 6% preferred stock, \$24,000, making \$110,180 of fixed and contingent charges ahead of any charges to be created in paying for the properties and improvements. The properties and improvements will require \$957,000, aside from the underlying securities mentioned in the preceding sentence. Granting, for the purposes of "trying out" a plan, that this money will cost the new company 6%, the added charges are \$57,420, making a total charge of \$167,600, to compare with actual net earnings of \$281,200 and prospective earnings of \$353,900. This was not, even in 1916, a particularly strong showing upon which to issue definite securities. It could be used, however, provided the cash to be raised was small in amount and the bonds sold to obtain the cash secured by a first mortgage—without prior lien—on the entire property.

The Galesboro bonds were stronger than any bonds likely to be issued by the consolidated company. They must be either paid off or exchanged into new securities on a very favorable basis. This applies with less force to the Galesboro preferred stock.

The Belgrade and Sumpter bonds, yielding only 4% and representing unsubstantial liens on small properties, could surely be exchanged into new bonds. Owing to the narrow margin of earnings available, the Clifton bonds could be exchanged on about an even basis. A small premium or discount, either way, on the refunding of these three small bond issues would not be of much importance in determining the general financial plan.

On the basis of past earnings only, \$2,800,000 of 5% first mortgage bonds could be issued, since bonds of a public utility such as this should

show past earnings at least twice interest charges. This would absorb \$140,000. Preferred stock to such an amount could be issued that the dividend would not absorb more than a third to two-fifths of the remaining earnings. This would permit the issue of \$750,000, 7% preferred stock. The amount of common stock is unimportant, except to the holders of the \$300,000 common stock of Galesboro not held by Stetson and Sampson. An equitable adjustment of this will be discussed presently.

We have therefore the following senior securities to use in the promotion:

First Mortgage 20-Year 5% Bonds.....	\$2,800,000
Preferred Stock 7%.....	750,000

An offer is now made to the holders of the \$1,000,000 Galesboro bonds to exchange them, par for par, into the new bonds together with a cash bonus of 10%, or \$100 a bond. This would enable the holders to mark their bonds down to 83½. A medium-grade 5% public utility bond, showing net earnings of twice interest charges, was worth about 88 in the spring of 1916. We will assume, therefore, that the proposition is accepted by some 95% of the bondholders. The remaining 5% of bonds are called at 105 and the Galesboro mortgage is canceled.

The holders of the Belgrade, Clifton, and Sumpter bonds are offered par in new bonds. The offer is accepted, with the exception of the holders of \$6,000 par value of bonds. This amount of money is deposited with the respective trustees and then the mortgages are canceled.

These refunding operations absorb \$1,786,000 of new bonds, and cost as follows:

Bonus to \$950,000 Galesboro Bonds.....	\$95,000
Calling \$50,000 Galesboro Bonds.....	52,500
Deposit on Small Bond Issues.....	6,000
	<hr/>
	\$153,500

As stated earlier, the properties and the contemplated improvements will cost \$957,000 in money (aside from the bonds to be refunded and the Galesboro common and preferred stocks). With the money required for the bond refunding, there must be raised \$1,110,500.

The preferred stockholders of the Galesboro Company are offered new 7% preferred stock in exchange for their old 6% preferred stock. The bankers who placed the Galesboro preferred stock are given 5% bonus in new preferred stock for effecting the exchange. Sampson and

Company will purchase this bonus at 80%, so that the bankers can receive a cash commission of 4%. All the preferred stock is exchanged. It absorbs \$262,500 of the preferred stock. There remains, therefore, \$1,014,000 in new bonds and \$487,500 in new preferred stock with which to raise \$1,110,500 in money. The bonds, the entire remainder, are sold to M. U. Harlow and Company, who bought the original Galesboro bonds, for 85%. This sale gave the promoters \$861,900. The promoters then sold \$300,000 of the preferred stock for 87%. This yielded the company \$261,000. The total money realized from the sale of securities was, therefore, \$1,122,900, ample to meet the actual money requirements. The unsold preferred stock passed into the treasury of the new company.

Some nominal amount of common stock was issued. This was determined by the exigencies of the situation. Suppose an issue of \$3,000,000 was used. On the basis of the past earnings this issue of common stock showed, after fixed and contingent charges, about 3%. The common stock of the Galesboro Company showed earnings of about 8%. The holders of the \$300,000 par value, just one-fifth interest of Galesboro common stock not held by Stetson and the Sampson firm, were offered 2 shares of new common stock for one share of Galesboro, a one-fifth interest in the new company. The offer was unanimously accepted. This required the issue of \$600,000 new common stock. The remaining \$2,400,000 was divided equally between Stetson and William Sampson and Company.

In this particular solution of the problem it is assumed that a 5% first mortgage, 20-year, public utility bond could be sold to the public at about 90. This was true in the spring of 1916. It certainly was not in the spring of 1921. If, therefore, no available market exists for the bonds, some other means must be found of furnishing the proportion of the cash requirement that, had a market existed, would have been realized from the sale of the bonds and preferred stock.

If interest rates are such that new first mortgage bonds cannot be sold except on an 8% or 8½% basis, as in the spring of 1921, some other solution of the problem would have to be adopted.

The course adopted in such a case would depend on the confidence of the promoters in their estimate of the earnings for the year after the improvements were completed, in this case the year ending September 1, 1917, and upon their belief regarding the future course of interest rates. Assuming that they had implicit confidence in their estimates and believed interest rates were falling, the promoters might wisely secure the necessary money by the issue of 7% 2-year notes at 98. The best course in such a case would probably be to secure the refunding of all the underlying bonds,

in the manner described in the solution of the problem, and then to hold the remaining \$1,014,000 bonds in the treasury of the new corporation. The promoter would then issue \$1,200,000, 8% second mortgage 2-year notes, junior to the bonds, but senior to the preferred stock. At the end of the 2 years, provided the promoters' estimates of earnings were actually realized, the treasury bonds could be sold to meet part or all the notes. Meantime, too, the increased earnings will have made easier the sale of the preferred stock held in the treasury.

In case the promoters have not implicit confidence in their prediction of earnings, and if they do not care to assume the risk of the issue of short-term notes, then the "block" plan should be used. In such a case the amount of the issue of the common stock should be further increased so that an apparently liberal bonus of common stock may be given away without jeopardizing the control of the company by the promoters and bankers.

40. Engineers discovered a water power in Arkansas capable, on development, of producing 28,000 h.p. of electrical energy at a net cost—maintenance, labor, and superintendence—at the switchboard of only \$12,000 a year. The river above the fall ran through steep banks so that the cost of development was very small, about \$1,750,000, or less than \$65 per horse power. But there were few consumers within 50 miles of the falls. The engineer planned to attract manufacturing industries that used large amounts of electrical energy to locate at or near the development and to sell them energy at a very low rate. There are numerous metallurgical processes that can be used only when an abundance of cheap electrical energy is available. The engineer had secured an agreement from one of these to construct a plant at the fall which would use 10,000,000 k. w. h. a year at a price not to exceed 1 cent. He had other industries in prospect, the total gross revenue from which might reach as high as \$200,000 for the first year.

Construct a financial plan by which bankers could obtain the requisite \$1,750,000 required from the public.

\*\* 41. The Tompkins Falls Power Company was promoted in 1913 and its hydroelectric development at Tompkins Falls on the Ocmulgee River was finished in 1915. It was successful from the first. It was found possible to develop considerably more electric energy than could be profitably sold in the immediate environs. Twenty-seven miles away were 4 small electric light companies, located at Burleyville, McGregor, Milford, and Adams Center.

Milford, the largest, was geographically the center of the group and the other 3 were all located within 3 miles of Milford. Burleyville had a large chair factory and was connected by a small unprofitable electric railway with the center of Milford. Each town had its separate steam electric generating plant and the Milford and Burleyville Railway Company also had its own steam plant. The management of the Tompkins Falls Power Company proposed to acquire the 4 electric companies (but not the street railway) and to form the Cascade Power Company, the latter to acquire all the property previously owned by the Tompkins Falls Power Company and the 4 distributing companies. Each of these has been reasonably successful, although increasing costs of coal have diminished the net profits of the 4 distributing companies. Great economies are therefore expected to result from closing the separate steam generating stations and connecting all the distributing systems with the hydroelectric company.

The following represents the capitalization of the 5 companies just before the organization of the Cascade Power Company:

	TOMPKINS FALLS	BURLEYVILLE	McGREGOR	MILFORD	ADAMS CENTER
Bonds.....	\$2,000,000 5's	\$160,000 6's	\$ 450,000 5's	\$1,000,000 5's	None
Preferred Stock..	600,000 n.c. 6%	None	None	500,000 c. 7%	None
Common Stock..	3,000,000	250,000	1,000,000	00,000	\$60,000

EARNINGS (EVEN 000) AVERAGE 5 YEARS	TOMPKINS FALLS	BURLEYVILLE	McGREGOR	MILFORD	ADAMS CENTER
Gross.....	\$583,000	\$28,000	\$187,000	\$337,000	\$38,000
Net.....	340,000	14,000	64,000	153,000	9,000

PRECEDING YEAR (EVEN 000)	TOMPKINS FALLS	BURLEYVILLE	McGREGOR	MILFORD	ADAMS CENTER
Gross.....	\$684,000	\$36,000	\$219,000	\$401,000	\$40,000
Net.....	417,000	15,000	61,000	162,000	2,000

The Adams Center plant was owned by a man, Simons by name, wealthy for that neighborhood, now 66 years of age. He had just previously married a young lady of 22, who wished to leave the prosaic surroundings of Adams Center. Accordingly Simons offered to sell the property for \$40,000 cash. The preferred stockholders of Tompkins Falls and Milford were each offered new 7% preferred stock in the Cascade Power Company. The bondholders of each of the companies were offered 80% in cash for their bonds or the privilege of exchanging them for the 5% first mortgage bonds of the Cascade Power Company, "when, as and if" issued together with a bonus of  $2\frac{1}{2}\%$ .

Engineers estimated that the transmission lines necessary to connect the hydroelectric generating station to each of the distributing systems together with the necessary substations will cost in actual investment \$117,000. It will require \$27,000 to revamp the distributing system at Adams Center. \$292,000 should be spent during the first year in the other 3 towns. This would increase the gross earnings of the 4 distributing companies by 27%. In addition, the electric railway company agreed to buy not less than 500,000 k.w.h. a year at 2.15 cents metered on the primary side at the Milford substation. Without reference to the capital charges, but including line and transformer losses, electricity so delivered would cost the company .73 cents. Without reference to the street railway contract the changes and improvements enumerated would reduce the operating ratio of the 4 distributing companies by 13%. The normal annual increase of the gross earnings of the hydroelectric company alone had been 9%, and engineers estimated that the cost of operation for the territory and customers previously served by it alone would be decreased after the consolidation by  $1\frac{1}{2}\%$ .

Prepare a financial plan for the promotion of the Cascade Power Company.

\*42. Three men undertake the promotion of a hydroelectric power development in northern New York State. An engineer whom they have employed, reports the following essential facts: A river with a natural fall of 6 feet and rough water for half a mile above the falls can be developed by building a cement dam at or near the natural fall. This will cost, without machinery, \$278,000. Land on both sides of the natural fall sufficient to give control and to erect a power station upon can be acquired for \$67,000. The land on both sides of the river, above the falls, will have to be acquired or condemned. It will involve costs and settlements of at least \$81,000. Six miles above the rough water the river spreads out over a large meadow.

This must be acquired or condemned at a cost of \$32,000, and the dam site and dam for impounding the water will cost \$17,000. It will also be necessary to acquire the land about the outlet of the river from a large pond, in order to control the flow, at a cost of \$6,000; and damage suits from owners of timber, flowed from damming the outlet of the pond, might run to \$20,000. These expenses, however, would not have to be met at the time of promotion. The equipment costs would be about as follows:

Water wheel machinery and installation, and electrical generating machinery and power-house would amount to \$136,000. The rights of way and construction of a transmission line of 32 miles for 33,000 volts, together with the transformers, will cost \$118,000. Engineers estimate that with the pondage and storage obtained from the large pond and the meadow dam the installation will develop 2,780 electrical horse power at an average of 18 hours per day for the entire year. In addition there would be at least 1,250 horse power during at least 8 months of the year. At the end of the 32-mile transmission line is a city of 10,000 inhabitants. The promoters obtained an option on the securities of the electric light company in that city on the following terms: \$185,000 par value of first mortgage 5% bonds at 86, \$90,000 par value of 6% preferred stock at 88, and \$200,000 par value of common stock at 62. The preferred stock had no accumulated dividends and the common stock was then paying 4% a year in dividends. Electricity was generated by a steam station of fair efficiency, built about 7 years before. It had one k. w. G. E. turbine 7 years old, and one 500 k. w. G. E. turbine installed the year before.

The earnings of the company were as follows:

	Previous Year	Next Preceding Year	Next Preceding Year
Gross Earnings. . . . .	\$106,000	\$98,000	\$81,000
Operating Expense..	74,000	67,000	53,000
Net Earnings.....	32,000	31,000	28,000

The company had sold 2,684,000 k.w.h. electricity during the preceding year, but the load factor was poor. There were 3 knitting mills in the immediate locality of the city. These would purchase their power of the new development at 2 cents a k.w.h., and agree to take at least 1,000,000 k.w.h. annually altogether. The company could sell its entire surplus or secondary power at 1 cent per k.w.h.

The promoters decide to buy the distributing system and proceed to develop the water power. A new company is formed to absorb the old electric company and carry on the development.

Outline a financial plan.

## Chapter X—The Underwriting Syndicate

43. The Kentucky Eastern Electric Company, a consolidation of 9 small electric companies and a hydroelectric company, has just contracted with Monson and Company of New York to sell to them \$4,000,000 first mortgage 6% bonds for 87½. Monson and Company form a syndicate to acquire these bonds from themselves at 89. The syndicate agreement specifies that underwriters are to begin to offer the bonds to the public at 94 on April 1, and that the syndicate will close on or before May 1. Members will receive a selling commission of 3 points on all the bonds they sell and will participate in the profits and losses on the syndicate operations, as of May 1. James Mason and Company of Buffalo participated to the extent of \$100,000. On April 23 the managers announced that all the bonds had been disposed of. At that time James Mason and Company had sold \$65,000. Compute their gross profit.

Suppose Monson and Company had participated to the extent of \$500,000 in their own syndicate and had actually sold \$627,000 at the time of closure. Compute their gross profit from the Kentucky Eastern electric business.

44. There was a boom period of the textile business, during the later part of and immediately following the Great War. It was followed in the summer and autumn of 1920 by a very marked reaction. At the height of the boom the Continental Woolen Company offered to sell to its stockholders \$20,000,000 new common stock at par. The stock was then selling at about \$112 a share and had sold immediately before as high as \$140 a share. A syndicate was formed which, for a commission of 2½%, underwrote the stockholders' subscriptions. The market for the stock continued to fall and only 40% of the subscription was taken by stockholders. In order to protect the market the syndicate managers had bought 73,000 shares in the open market at prices ranging from 101 down to 87, an average of 96⅓. Finally after a series of postponements the syndicate was dissolved. Meanwhile the managers had paid \$156,000 in interest for carrying the syndicate commitments and no dividends had been received. The stock, at the time of the dissolution, was selling at \$53 a share. Harrison and Company of Cleveland had subscribed to \$250,000 of the underwriting.

What was their actual profit or loss, as computed on the current market value of the stock at the time of settlement?

Omit from consideration syndicate manager's commission.



45. The Central Railroad wished to insure the successful sale to its own stockholders of \$100,000,000, 6% debenture bonds at par. Accordingly an underwriting syndicate was formed by James B. Manson and Company, acting as managers. They received  $\frac{1}{2}$  of 1% commission for forming the syndicate, and the underwriters were paid 2% on their commitments. Eustis and Company of Syracuse underwrote \$60,000 of the debentures. The subscription was taken up entirely by the stockholders.

(a) What was Eustis and Company's profit or loss?

(b) Suppose the stockholders subscribed for only \$60,000,000 of the debentures and the managers sold the remainder on the open market and in Europe at an average of 90%. What was their profit or loss?

### Chapter XII—Repairs, Depreciation, and Obsolescence

46. The Newark, Maine, Gas Company found that a considerable proportion of the repairs to its mains and structures could be done most economically in the months of June, July, and August when the ground was free from frost, the weather settled, and labor relatively plentiful. Owing to the severity of the cold, repairs to mains cost, by actual computation, from 3 to 4 times as much if made in the middle of winter compared with the same repairs if made in the summer. But the policy of making repairs only in summer created such large fluctuations in the repair charges as to abnormally increase the earnings during the winter months and to abnormally decrease the earnings during the summer months. To avoid this the directors, at their meeting of December 18, 1919, appropriated \$15,000 out of earnings for the forthcoming year to be used for repairs, the sum of \$1,250 to be charged against the earnings of each month. The following were the expenditures for repairs during the year 1920: January, \$638; February, \$1,371; March, \$311; April, \$442; May, \$932; June, \$3,161; July, \$1,430; August, \$1,571; September, \$1,211; October, \$931; November, \$219; December, \$398.

How would you treat, on the balance sheet of December 31, 1920, any discrepancies between the allotted repair charges and the actual repair charges?

47. The Milford and Springfield Railroad, operating in New England, has found that its untreated cross ties decay, or become of no further use, in seven years. The road encounters a bad year, after having operated for a long period with ample but not inordinately liberal maintenance allowances. In the endeavor to reduce expenses the superintendent of mainte-

nance of ways and structures appropriated \$107,000 for the purchase of ties, a reduction of \$13,000 from the appropriation of the previous year.

But in the meantime the prices which the road was forced to pay the farmers for ties was raised 15 cents for No. 1 and 11 cents for No. 2. In consequence the road replaced one-tenth of all its ties.

Could or should its treatment of tie replacements be made to show on its balance sheet at the end of the year? Explain your answer.

48. The following is the balance sheet as of December 31, 1917, of the Conway Manufacturing Company, in existence for 8 years:

<i>Assets</i>		<i>Liabilities</i>	
Land (cost) .....	\$ 12,300	Capital Stock .....	\$500,000
Building (cost) .....	117,480	Notes Payable .....	30,000
Machinery (cost) .....	318,710	Accounts Payable .....	19,317
Inventories .....	279,414	Depreciation Reserve .....	131,123
Notes and Accounts Rec. .	137,618	Surplus .....	212,400
Cash .....	27,318		
	<u>\$892,840</u>		<u>\$892,840</u>

The income account for the year 1918, before dividends and depreciation, was as follows:

Total Gross Profits after Adjustments for Inventories,  
Returns, and Bad Debts..... \$218,973

The accountants required that the buildings be considered to have had, when built, a life of 20 years and the machinery a life of 10 years. But new machinery and large building improvements could be substituted for depreciation. During the year in question a new store house was built at a cost of \$2,718 and new machinery was installed at a cost of \$16,752. A dividend of 10% was paid and the rest of the earnings added to surplus.

Give a possible balance sheet for December 31, 1918, improvising reasonable entries where necessary.

49. The Endicott County Electric Company, having fixed assets of \$1,764,000, when built in 1910 sold an issue of \$1,500,000, 5% bonds to an investment house whose attorneys inserted in the indenture the provision that the company must set aside 3% of gross earnings each year as a depreciation reserve. The following gross earnings were obtained:

1911.....	\$156,872
1912.....	162,512
1913.....	172,660
1914.....	170,117
1915.....	159,131
1916.....	184,284
1917.....	210,653

At the beginning of 1918 the property—there having been no important capital improvements made in the meantime—was acquired by the Inter-County Power and Light Company. The management paid off the outstanding bond issue, thus relieving the company of the 3% depreciation obligation. Arthur Gray and Company, accountants, were employed to reorganize the accounting system. They condemned with great severity the method previously followed in computing the annual depreciation, and suggested that accountants go back over the books and re-establish a depreciation reserve on the assumption that a 4% annual reserve on the original cost of the entire property would have been proper. This was done.

What adjusting entries would have been necessary? Construct a reasonable and proper balance sheet for the Endicott County Company when taken over by the Inter-County Company, and a second balance sheet after the advice of Arthur Gray and Company had been followed.

50. The Paugus Mill, a 60,000 spindle medium goods cotton mill, was constructed in Fall River. \$25,000 was paid for land; \$216,000 was paid to the contractors for the erection of the buildings; \$109,000 to a firm of engineers for the installation of a power plant and power transmission machinery; \$739,000 was paid for machinery covering the various processes for the manufacture of cotton cloth. At the end of the first year Johnson, McHugh and Company, mill engineers, estimated that the proper depreciation charges were: structures, 5%; power plant and transmission machinery, 7½%; and cotton machinery, 10%. The profits, before depreciation and dividends, for the first year were \$117,318.

What were the net earnings before dividends?

\* 51. James Fleming, an engineer, made the following report to a firm of accountants about to open the books of The Sandy Lake Electric Company, with reference to the requisite depreciation and obsolescence charges.

The management, in order to protect their company against competition of more efficient plants in later years, wished to set up a reserve not only for depreciation but also for the obsolescence of equipment.

On the basis of Fleming's report, what should be the annual charges for both depreciation and obsolescence?

	COST (APPROXIMATE)	AVERAGE LIFE UNDER NORMAL CONDITIONS	PROBABLE NUMBER YEARS IT MAY BE USED BEFORE IT WILL BE EXPEDI- ENT OR ECONOMI- CAL TO SUBSTITUTE IMPROVED MODELS
<b>POWER-HOUSE</b>			
Buildings.....	\$42,000	40 years	50 years
Boilers, Super- heaters, etc.....	27,000	20 years	15 years
Generating Machin- ery (Exciters, Steam Turbines and Condensers)..	48,000	15 years	10 years
All Other Equipment to the Transfor- mer Platform....	18,000	20 years	20 years
<b>TRANSMISSION LINES</b>			
Transformers, etc...	9,000	12 years	.....
Poles (Including Pole Hardware)...	7,000	15 years	.....
Wire.....	16,000	.....	.....
<b>DISTRIBUTION</b>			
Meters.....	6,000	10 years	.....
Small Transformers	2,000	10 years	.....
Secondary and Ser- vices.....	8,000	50 years	.....

\*52. James Hardy and Company are manufacturers of jewelry specialties in Attleboro, Mass. Their accountants decide that they should make a general charge of  $2\frac{1}{2}\%$  to cover the depreciation on their buildings costing \$85,000 and  $7\frac{1}{2}\%$  on their machinery and equipment costing \$115,000. Mr. Hardy, however, is not satisfied with this rough method. The business uses certain special machinery which is being constantly improved upon. Since the industry is a highly competitive one it is necessary to substitute improved machinery as soon as this is put upon the market in order to keep

down the manufacturing costs. During the 40 years of his business experience as a manufacturing jeweler he noted that these substitutions occur in certain of the processes with greater frequency than in others. For example, he observes that of the \$115,000 invested in machinery, at least \$35,000 is invested in well-standardized machines which have not changed significantly during the last 40 years. On the other hand it has been necessary to discard certain special machines, costing \$25,000 on an average of every 5 years. About \$40,000 of other more or less specialized types have to be discarded and improved models installed about once in 10 years. The economical operation of the remainder of the machinery is not of such great importance as to require the substitution of improved models before it is worn out. Mr. Hardy passes a memorandum covering these observations to his accountants and asks them to recompute the depreciation charge, taking full account of the obsolescence of his machinery.

What change must they make, if any, in their original computation?

### Chapter XIII—Payments on Account of Borrowed Capital

53. The Peterboro Electric Company had a plant that cost in 1908, including all fixed assets, \$1,385,000. It had common capital stock of \$900,000 par value; and the company issued as of January 1, 1908, \$750,000 first mortgage 25-year 5% bonds. These were sold to bankers at 75. During 1913 the company paid 5% interest throughout the year on a floating debt which began as of January 1, 1913, at \$113,000, and slowly but steadily increased until it reached \$129,000 at the end of the year. The profit before interest charges, but after depreciation, taxes, and all other "out-of-pocket" expenses, was \$94,387.

What was the net profit available for dividends?

54. The Mercantile Manufacturing Company decided that it would be wise to secure \$2,000,000 of new capital in order to liquidate a portion of its unfunded debt. The directors at their meeting of April 3, 1916, decided to issue bonds. A banking house with which the treasurer entered into correspondence offered to buy 6% 20-year first mortgage bonds for 115, 20-year 5% bonds at 98½, or 20-year 4% bonds at 80. The accountants acting for the firm insisted that bond discount or bond premium should be extinguished by equal annual instalments, i.e., without reference to interest on either accumulated reserves or unextinguished premiums. Which offer of the banking house should the corporation accept?

55. There were two small factories located in Haverhill, Massachusetts, each making the same line of goods—ladies' turn slippers. The quantity output of the factories was approximately the same and in many other respects the two businesses were closely analogous. Goldmann had, at the beginning of 1913, a personal investment in the business of \$6,715—the accumulation of his previous savings. On the other hand, Kingsburg's personal investment amounted at the beginning of 1913 to \$16,817 and on that date he took in a partner, Stein by name, who immediately invested \$10,000 in the business.

At the end of 1913 the proprietors handed their profit and loss statements to John Stiles, the cashier of the Haverhill National Bank, who in turn presented them to the full board of directors. Stiles explained to the board that the shoe business during the year had been good, and the proprietors of each of the two businesses requested an increase of their respective lines of credit. An argument then ensued between two of the directors as to which business had been the more successful. Discuss this problem.

#### STATEMENT OF YEAR ENDING DECEMBER, 1913 (EVEN 000)

	Goldmann	Kingsburg and Stein
Total Receipts less Trade Discounts.....	\$218,000	\$246,000
Labor, Materials, Royalties, and Rentals.....	188,000	221,000
Gross Profit.....	\$ 30,000	\$ 25,000
Depreciation and Repair of Machinery Owned.....	1,000	3,000
Bank Discounts.....	7,000	2,000
Proprietors, Drawn out.....	20,000	8,000
Increase of Net Worth.....	\$ 2,000	\$ 12,000

56. The two slipper businesses described in the preceding problem continued to be fairly successful, and in 1915 Kingsburg and Stein were incorporated with a capital stock of \$200,000. Goldmann continued to operate his business alone. As of January 1, 1916, the Kingsburg and Stein Company sold \$100,000 debenture bonds, due January 1, 1926, to their friends at 90%. Part of this money was invested in the equity in a factory building of their own, and part was used for expansion. The following are some of the important entries in connection with their income and expenditure account as of December 31, 1921 (even 000):

Gross Sales, less Trade Discounts.....	\$1,670,000
Labor, Material, and Royalties.....	1,485,000
Salaries to Kingsburg and Stein.....	30,000
Taxes.....	2,000
Repairs.....	1,000
Enlargement to Building.....	4,000
Interest on Mortgage.....	6,000
Bank Discount.....	17,000
Depreciation to Building and Machinery Owned.....	2,000

Determine the net profit for the year.

#### Chapter XIV—The Corporate Surplus

57. The income accounts, abbreviated, of a wire mill, after all charges were as follows:

	1908	1909	1910	1912	1913
Gross Profit, after all Manufacturing Costs.....	\$1,375,000	\$1,007,000	\$962,000	\$2,873,000	\$1,214,000
Interest on \$4,000,000 5% Mortgage Bonds.....	200,000	200,000	200,000	200,000	200,000
Discount on Bonds.....	87,000	87,000	87,000	87,000	87,000
Dividend on \$3,000,000 Preferred Stock.....	210,000	210,000	210,000	210,000	210,000
Dividends on \$5,000,000 Common Stock.....	100,000	200,000	200,000	300,000	300,000

At the meeting of the board of directors, called for the purpose of declaring the second semiannual dividend in the autumn of 1913, one of the directors proposed the declaration of an extra dividend. At this point the treasurer stated that the depreciation reserve had been continuously underestimated; as a result, \$850,000 ought to be added to it. At the same time the directors decided that \$28,000, profit on the sale of real estate, should be taken away from surplus.

What might the accountant do with this profit on real estate so that it would not appear in the surplus account? What was the adjusted surplus?

#### Chapter XV—Insurance and Special Reserves

58. The Cape Ann Fisheries Company maintained its own fleet of fishing vessels. There were 118 vessels of all sizes and of varying ages and values. Several vessels were 40 years old and hardly seaworthy; there were several large vessels less than a year old.

The company, as of January 1, 1907, adopted the policy of self-insurance, transferring immediately a sum of \$200,000 from the general surplus account to insurance reserve account. Thereafter it credited to this account the sum of \$15,000 annually out of earnings. All its vessel property was properly depreciated from year to year.

The company suffered no vessel loss in 1907 or 1908. In 1909 one vessel was lost which had a book value, after depreciation, of \$27,000. No loss occurred in 1910. In 1911 a small, old vessel having a depreciated value of \$7,000 was lost. In 1912 three vessels were lost—one worth \$65,000, another \$28,000, and a third having a depreciated book value of \$19,000. There were no losses in 1913 and 1914. In 1915 there was a loss of \$17,000, and none in 1916. During this time the company received 4.8% interest on the funds represented by its insurance reserve.

What was the condition of this reserve account after a period of 10 years?

59. The Sudbury and Osterville Railroad reported to the Public Utility Commission for its fiscal year ending June 30, 1921. After depreciation, adequate maintenance, interest charges of all kinds, but before all taxes, there remained net earnings \$107,000, of which \$58,000 accrued during the preceding 6 months. Analogous earnings for the preceding year were \$104,000, of which \$55,000 accrued during the last half-year. On October 20, 1920, the treasurer had paid \$16,000 in taxes to the towns and municipalities through which the road passed, covering local taxes for the taxable year beginning April 1, 1920. For the year from April 1, 1919, the local taxes had amounted to \$14,000, and for the year before that to \$12,000. The amount of taxes were never known before September 15 of the current year. The state through which the road passed levied a capital stock tax of \$1 per \$1,000, in lieu of all franchise taxes. The federal government assessed in March corporate income taxes of 1920 on the net earnings, exclusive of all taxes and assessments, for 1920. These income taxes were payable in four equal instalments March 15, June 15, September 15, and December 15. The road had \$1,000,000 of common and \$416,000 of preferred stock.

What was the actual net income for the year ending June 30, 1921?

60. The Muddy Creek Coal Company was organized in 1908. In 1910, in order to purchase and develop an adjacent coal property, the directors issued \$1,500,000, 20-year, 6% gold bonds. The bankers required the insertion of a sinking fund clause which required that the company must set aside 5 cents a ton for every ton of coal mined and that the fund must amount to at least \$45,000 a year.



The sinking fund was to be invested in bonds purchased at the market price.

In 1912 the company mined 1,687,534 tons of coal. During January, 1913, when bonds were acquired for the sinking fund, the market price was about 86½.

How many bonds were acquired?

61. The Interurban Consolidated Traction Company, a holding corporation organized under the laws of Delaware, owns the stocks, debentures, notes, and certain mortgage bonds of a group of traction companies operating in Illinois.

The Interurban Company issued in 1917, \$3,685,000 first lien collateral trust 6% bonds secured by all its treasury assets. The collateral trust agreement under which these bonds were issued provided that a fund consisting of 2% of the gross earnings shall be set aside each year for the purchase at the market price of either bonds of this issue, or else bonds of the underlying companies senior to it.

The following is a balance sheet of the Interurban Consolidated Traction Company as of December 31, 1918 (even 000) and before the acquisition of bonds for the sinking fund:

<i>Assets</i>		<i>Liabilities</i>	
Property Account.....	\$13,295,000	Decatur and George-	
Bonds in Treasury:		town 6's 1924.....	\$ 516,000
Decatur and George-		Cairo and Eastern 4's	
town 6's.....	402,000	1949.....	768,000
Cairo and Eastern...	23,000	Illinois and Southern	
Illinois and Southern	98,000	6's 1930.....	310,000
Interurban Collateral		Interurban Traction	
6's.....	13,000	Company Collateral	
Accrued Interest on		Trust 40-Year 6's	
Treasury Bonds....	7,000	1957.....	3,685,000
Materials.....	248,000	Debenture Notes 7's	
Advance Payments....	8,000	1923.....	1,000,000
Discount on Bonds less		Bills and Accounts Pay-	
Profit from Purchase		able.....	165,000
of Treasury Assets...	85,000	Interest Accrued.....	76,000
Deferred Assets, Misc.	16,000	Preferred Stock 6%	
		Cumulative.....	2,000,000
		Common Stock.....	5,000,000
		Surplus.....	675,000
	<u>\$14,195,000</u>		<u>\$14,195,000</u>

December 31, 1918, the bonds of the Decatur and Georgetown could be bought in the open market for 92; the 6% bonds of the Illinois and Southern could be bought in the open market for 98 and the 4% bonds of the Cairo and Eastern could be bought for 76, while the first lien collateral 6's of the Interurban Consolidated Traction Company itself could be bought for par.

The following represents the income account for the preceding year:

Gross Income.....	\$2,273,675.30
Operating Expenses.....	1,492,414.65

Considering all things—economy, saving in amortization, an increase of security of the junior securities of the Interurban Consolidated Traction Company—in what manner should the sinking fund be invested?

\* Recast the balance sheet given above after these purchases have been made.

### Chapter XVI—The Stockholders' Surplus

62. The Perkins Manufacturing Company was organized in 1917 to manufacture fabricated tinware. Eleazer H. Perkins had been the factory superintendent of a large and well-known Connecticut business engaged in the same line of production. He had secured the financial backing of certain relatives and friends. The business had prospered. At the end of 1920 Perkins presented the following statement:

*Pr*

Total Sales.....	\$876,000
Cost of Manufacture, including Taxes, etc.....	704,000
Interest on Bank Loans.....	67,000
Net Profits before Dividends.....	105,000
Dividends on Preferred Stock.....	<u>35,000</u>
Surplus Available for Dividends on \$1,000,000 Common Stock	\$ 70,000

*Probably not.*

Should a dividend be declared on the common stock?

\*63. James Whiting, the American-born son of an immigrant mule spinner who came from Lancashire to New Bedford in 1847, has been working in the Sanborn yarn mill since he was 11 years of age. He is now 33, has gained a thorough technical knowledge of the manufacture of fine yarns, and meanwhile he has attended the local textile school, evenings. He has shown remarkable mechanical ingenuity, as is attested by the fact that he received a patent on an improved winder for which a machinery manufacturer paid him \$10,000.

Two years before a local capitalist, connected with a Boston commission house, being impressed with the man's ability, secured subscriptions to \$1,000,000 in money in order to build a yarn mill. The capitalist, Avery by name, became president and Whiting treasurer. Avery's commission house assumed responsibility for selling the yarns and the entire management of the mill was turned over to Whiting.

The mill cost \$786,000 in money to erect. Seventy-four thousand dollars was subscribed by a Providence machinery house making the total capital invested in the enterprise—its net worth at the beginning—\$1,074,000.

The balance sheet when the mill was opened stood as follows:

<i>Assets</i>		<i>Liabilities</i>	
Plant.....	\$ 786,000	Capital Stock	
Cotton.....	82,000	Preferred 7% Cumu-	
Cash.....	206,000	lative.....	\$1,074,000
Good-Will.....	1,000,000	Common.....	1,000,000
	<u>\$2,074,000</u>		<u>\$2,074,000</u>

The preferred stock, representing actual money investment, is owned as follows:

Avery, personally.....	\$100,000
Avery, Green and Co.....	300,000
Whiting, personally.....	100,000

(This amount constituted Whiting's entire savings of \$17,000 and \$83,000 loaned to Whiting by Avery, who took Whiting's preferred and common stock in the Whiting Mills, Inc. as collateral.)

Avery's Personal Friends.....	165,000
Whiting's Friends, Associates and Small Investors of New Bedford who Invested on the Strength of Whiting's Reputation.....	175,000
Local New Bedford Bankers.....	135,000
A New York Yarn Merchant.....	25,000
Providence Machinery Manufacturer.....	74,000
	<u>\$1,074,000</u>

The \$1,000,000 of common stock was divided equally between Avery and his commission house on the one hand and Whiting on the other hand.

At the end of the first year Whiting presented to the board of directors of the mill the following income account and balance sheet before dividends.

Gross Profits after Returns, Inventory Adjustments, etc.	\$161,812
Depreciation 4% of Original Cost.....	31,440
Interest Payments, Bank Discounts.....	12,916
Net Profits.....	<u>\$117,456</u>

<i>Assets</i>		<i>Liabilities</i>	
Plant.....	\$ 786,000	Capital Stock	
Cotton.....	109,117	Preferred 7% Cum..	\$1,074,000
Goods in Process and Finished.....	213,918	Common.....	1,000,000
Accounts Receivable...	301,715	Depreciation.....	31,440
Cash.....	38,716	Notes Payable.....	226,570
Good-Will.....	1,000,000	Surplus.....	117,456
	<u>\$2,449,466</u>		<u>\$2,449,466</u>

At the time the preferred stock was subscribed, Whiting and Avery stated that no dividend, preferred or common, should be paid until the end of the first year and then only if the earnings fully warranted it. Every subscriber understood the cotton yarn business.

At the directors' meeting Avery's partner, Green, moved that a dividend of 7% be declared and paid on the preferred stock and 1% on the common out of the earnings of the first year. Avery objected to the payment of the dividend on the common stock, but would not vote against the preferred dividend if the rest of the board of directors so voted. Whiting stated that he was opposed to any dividends whatever. Thereupon a three-cornered argument ensued between Green, Avery, and Whiting.

State under appropriate headings the arguments advanced by each.

With whom would you have voted and what was the strongest argument advanced? (Consider yourself a director having a small preferred stock interest and permanently interested in the welfare of the mill.)

64. An expert rubber chemist, James Mayer by name, commenced the business of manufacturing rubber specialties, in 1910. Twenty-five thousand dollars was loaned to him by his father-in-law, who accepted his note. The local bank in Binghamton, where the business was started, loaned him \$10,000.

The business was a success from the beginning. By 1916 Mayer had paid off his father-in-law and increased the net worth of his business to \$118,000. At that time he decided to incorporate his business and erect a small tire factory in Akron, Ohio. He planned to concentrate his efforts on the manufacture of a special hand-made tire using a special patented "zinc" process and a coarse fabric carcass made out of selected combed Egyptian cotton. To carry out his plans Mayer required at least \$1,000,000, \$125,000 of which he could secure from selling his Binghamton factory and liquidating the quick assets of the business. The remaining \$875,000 was promised him by a firm of Cleveland bankers through the organization of a small syndicate. These plans were carried out and by the autumn of 1917 a small but thoroughly modern and efficient factory had been built in Akron and the business started. The \$1,000,000 of actual money was represented by 7% cumulative preferred stock. In addition \$500,000 in common stock was issued to Mayer and the same amount to the syndicate of bankers who furnished him with the greater part of the capital.

*amplified help?*

This business, too, was a success from the very beginning. During 1918, the first full year, the Mayer Manufacturing Company made on gross sales of \$1,967,000 a net profit, after reasonable charges to depreciation, of \$171,918. From this preferred dividends of \$70,000 were paid and the remainder carried to surplus and reinvested in the business. The year 1919 was very successful also, and the business during the first five months of 1920 was of unprecedented volume. On June 1, 1920, the company showed the following monthly balance sheet (even 000):

<i>Assets</i>		<i>Liabilities</i>	
Plant.....	\$1,218,000	Capital Stock	
Good-Will.....	1,000,000	Preferred 7% Cumulative.....	\$1,000,000
Rubber, Cotton Fabric and Other Materials..	310,000	Common.....	1,000,000
Goods in Process and Finished Tires (Akron)	216,000	Notes Payable, Banks...	350,000
Tires on Consignment with Special Agents and Service Stations..	93,000	Foreign Drafts.....	74,000
Customers' Notes.....	84,000	Accounts Payable.....	289,000
Customers' Open Accounts.....	59,000	Depreciation Reserve...	42,000
Cash.....	37,000	Profit and Loss.....	262,000
	<u>\$3,017,000</u>		<u>\$3,017,000</u>

799

713

*Common  
blunders  
in 1920.*

President Mayer reported to the directors at the meeting of June 8, that the company's policy was to place a reasonable number of tires in the hands of special agents who featured the Mayer tire at the exclusion of other makes. In addition to their consignments, however, the company had then on hand actual orders from retail dealers and garages sufficient not only to exhaust the present stock of finished goods in the Akron warehouse but to keep the factory in full operation until August 15. The orders booked for the first week in June were 165% of the orders booked during the first week of June, 1919. There had been a steady rise in the wholesale prices of plantation rubber and Egyptian cotton, and President Mayer expressed the belief that rising prices of raw materials would continue throughout the year. He desired, therefore, the authority of his board for entering immediately into contracts with importers of crude rubber and cotton fabric mills to cover all the orders now on hand and the probable normal demand up to October 1. This would involve contracts of about \$380,000 at the then prevailing prices. The board of directors voted the authority without discussion.

The rate of new orders began to decline slightly on June 17. By July 1, cancellations of orders, a factor never before reckoned with, began to appear and at the same time the automobile industry, upon which the tire industry is directly dependent, sustained a sudden collapse. Mayer, following the authority of his board, had ordered \$118,000 worth of tire fabric and approximately \$93,000 of crude rubber. On June 23, he ceased to place further orders and on July 4 secured the cancellation of \$37,000 of his order of fabrics (that proportion on which the mills had not themselves covered on raw cotton). He could not honorably repudiate any of his crude rubber contracts, and he did not try to.

By September 1, the tire business had suffered a complete collapse. By careful planning Mayer had been able to dispose of a considerable proportion of his manufactured stock so that no actual loss resulted. He had ceased to manufacture altogether about August 20. At the directors' meeting of September 7, the following balance sheet was presented:

<i>Assets</i>		<i>Liabilities</i>	
Plant.....	\$1,218,000	Capital Stock	
Good-Will.....	1,000,000	Preferred 7% Cumulative.....	\$1,000,000
Rubber, Fabric and Other Materials on Hand (cost \$116,000 at Market).....	67,000	Common.....	1,000,000
		Notes Payable, Banks..	313,000
		Accounts Payable.....	98,000

*Dividend would take only \$17,500 out of cash. Loss of this amount would not do much toward*

Tires on Hand and on Consignment (80% of Cost).....	101,000	Depreciation Reserve...	42,000
Customers' Notes (probably 95% good).....	162,000	Profit and Loss.....	241,000
Customers' Open Accounts.....	81,000		
Cash.....	65,000		
	<u>\$2,694,000</u>		<u>\$2,694,000</u>

*476,000*

In addition, the company is under contract to receive \$27,000 worth of fabric (having then a market price of about \$21,000) and \$62,000 worth of crude rubber (then having a replacement value of about \$37,000). Both the fabric and rubber markets were falling.

The president stated that he was making "special offers" and the like to agents with the result that his stock was moving on the whole satisfactorily although the prices then being realized were about 85% of the actual cost of manufacture. He hoped to re-open by October 1, on the basis of reduced labor and material cost. He felt on the whole encouraged in spite of the chaotic conditions of the crisis through which he was then passing. The dividend on the preferred stock had always been paid. He asked the directors to consider the advisability of paying the quarterly dividend of  $1\frac{3}{4}\%$  due October 1.

*Yes. Community expects them. Credit standing.*

What is your judgment? *No. Cheap way to borrow cash.*

#### Chapter XVIII—Expansion Among Big and Little Manufacturing Concerns

65. There are three small jewelry businesses located in Lowell, Massachusetts. The statements for the preceding year are as follows:

	Johnson	Everett	Stuart Brothers
Tools.....	\$ 450	\$ 680	\$ 916
Merchandise.....	1,680	2,963	8,511
Debts.....	318	0	2,717
Total Sales.....	6,817	14,711	35,654
Cost of Merchandise, Rent, and Labor..	6,139	9,613	31,329

It is planned to form a corporation to be called Johnson, Stuart and Everett, Inc. All the debts are to be paid, personally, by the new president, Solomon P. Stuart, who will take a 5-year note in return. Assuming the data given above represent a fair index of the three businesses, what are the proportions of common stock that should be distributed to the three constituent businesses?

66. In the city of Worcester, Massachusetts, in 1917, there were 7 small custom foundries and drop forges, each doing a relatively small business. Owing to the hectic prosperity of the metals trades in the United States, everyone of these small shops had more orders for work than it could execute. One of the younger men, Thomas Gilson by name, thought of the idea of combining them into a single corporation. Gilson, an expert in the manufacture of small drop forgings, knew nothing about finance. He did have the conviction, however, that if the 7 competing forges and foundries were united under one management, each unit could specialize in a special type of orders. He thought over the matter a long time, and finally went to a young investment banker who had married a schoolmate of his wife's. The banker, Edward Halladay of Halladay, Richards and Company, offered to try to effect the consolidation, to meet all the expenses incident to the undertaking, including attorneys' and lawyers' fees, in return for a fee of 10% of the common stock of the consolidation. Halladay called a meeting of the proprietors and partners of the 7 foundries and forges at which, having been properly coached by Gilson, he explained the advantages of consolidation. Among these advantages he enumerated: collective purchases of iron and coal; a uniform and stronger policy of dealing with labor unions; distribution of orders to the foundry or forge best able to take care of them; easier access to bank credit; and better credit with the furnace men. Halladay's talk made a favorable impression, but the men were skeptical about the possibility of arranging terms suitable to all 7 of the owners. Halladay proposed different plans all looking to the formation of a corporation having only preferred and common stock. The plans differed only in the manner in which the preferred and common stock was distributed among the owners of the plants.

Outline 4 different plans that might have been suggested.

\* 67. There were 4 carpet mills located within 60 miles of each other. The following is a brief description:

The Cartersville Mill. The corporation, organized in 1897, owned a small modern mill devoted to the manufacture of inexpensive ingrain carpets. James Edgarson built the mill and was the largest stockholder in the corporation—in fact all the stock was held by Edgarson, his wife, his uncle, and their very close friends. Edgarson had made a great deal of money from the mill and had withdrawn the earnings each year and invested them in high-grade municipal bonds. The mill had never been enlarged or extended. Edgarson, now 62 years of age, wished to retire altogether from the business and move to California.



The Empire Corporation. Organized in 1912. This mill was about the same size as the Cartersville mill, but had larger liabilities at the banks. It was owned by a group of Philadelphia men and managed by John Towner. He was about 38 years of age and then recognized as distinctly the ablest carpet man among the younger men. He had the absolute confidence of his stockholders and associates. He was ambitious, keen, unmarried, and his business was his one and only thought.

The Sawyer Manufacturing Company and the Climax mills. Small carpet mills owned by about the same people, although the managements were separate. The Sawyer mill was located in the same town as the Empire. It was the oldest mill of the entire group, built over 50 years before, antiquated and inefficient. But its brand, "The Chesterfield Wiltons," was highly esteemed in the trade. The Climax mill had been acquired 6 years before at a receiver's sale by the 3 largest stockholders of the Sawyer mill. During the 6 years it had been operated by them, it had made a little money. The plant was antiquated and not capable of efficient operation.

Towner approached Alden Richardson, the largest single stockholder of the Empire Corporation and a man of large means, with the plan of acquiring the Cartersville, Sawyer, and Climax mills, and organizing a new corporation. Richardson promised to back Towner in the undertaking to the extent of \$500,000. He also promised to secure for him the co-operation of Wilkins and Company, bankers.

Towner secured an option from Edgarson to be exercised within 90 days, covering the entire stock of the Cartersville mill for the sum of \$1,200,000, from which would be deducted an amount equivalent to any bank or merchandise loans outstanding at the time the option was exercised and increased by an amount equal to the actual cash in the treasury. But Edgarson guaranteed that there would be at least \$500,000 net quick assets. The money would have to be paid within 30 days of the time the option was exercised. Towner also secured an option on 86% of the common "one class" stocks of the Sawyer and Climax mills, to be bought at \$72 and \$37.50 a share respectively. Neither could, however, be purchased separately.

Wilkins and Company after several interviews promised to furnish money up to a maximum of \$1,500,000 under the following 5 conditions:

1. The money they supply to be represented by an issue of 7% preferred stock, none of which issue shall be given to any mill owner or sold to any banker. The bankers will purchase the stock at 90%.

2. \$500,000 in money be subscribed by Richardson, who shall receive second preferred stock to the extent of \$500,000 par value and a bonus of common stock.
3. Common stock only shall be given the stockholders of the Empire Corporation.
4. Towner to sign a contract to remain with the new corporation for at least 3 years.
5. The net quick assets of the consolidated company shall be at least \$600,000 to start with and must at all times remain at least a third as much as the outstanding first preferred stock.

These terms were agreed upon by Towner and Richardson, who forthwith prepared a plan of consolidation to be presented to the stockholders of the Empire Corporation.

The consolidated company was to be called "The Towner Corporation."

The following represent, in abbreviated form, the balance sheets of the four companies (even 000):

### *Assets*

	CARTERSVILLE	EMPIRE	SAWYER	CLIMAX
Plant.....	\$ 873,000	\$ 994,000	\$365,000	\$219,000
Inventories (wool, finished and unfinished goods) .....	592,000	417,000	284,000	111,000
Accounts.....	318,000	294,000	97,000	32,000
Cash.....	82,000	17,000	3,000	12,000
	\$1,865,000	\$1,722,000	\$749,000	\$374,000

### *Liabilities*

	CARTERSVILLE	EMPIRE	SAWYER	CLIMAX
Capital Stock:				
Preferred.....	\$ 400,000	\$ 700,000	.....	.....
Common.....	400,000	300,000	\$500,000	\$250,000
Depreciation.....	216,000	28,000	.....	1,000
Bank Notes.....	200,000	485,000	115,000	100,000
Accounts.....	38,000	198,000	81,000	21,000
Surplus.....	611,000	11,000	53,000	2,000
	\$1,865,000	\$1,722,000	\$749,000	\$374,000

Prepare a plan of consolidation such as will enlist the aid of Wilkins and Company and also be fair to the shareholders, preferred and common, of the Empire Corporation. Indicate the final disposition of all the stock of The Towner Corporation.

### Chapter XIX—Railroad Expansion

68. The Eastern Central Railroad required the Gray's Point road to reach tidewater. On the other hand the Gray's Point road could not even meet its operating expenses—much less its interest charges—were it not for the very favorable traffic agreement covering the interchange of freight executed 24 years before when the Eastern Central was an insignificant road, directly and explicitly dependent on the Gray's Point connection for over 60% of its traffic interchange. Meanwhile, the Eastern Central, through consolidation and intensive development, had become an important railroad, while the Gray's Point and Heron Bay Railroad had remained a purely local enterprise, stagnant and self-satisfied. Within a year the traffic agreement by which alone it could maintain its existence would expire.

It was clear that no choice was left for the Gray's Point road but to accept the terms proffered by the Eastern Central. Already the president of the latter road had intimated to Moses Collinwood, octogenarian and principal stockholder of the Gray's Point and Heron Bay, that unless arrangement could be made for consolidation of the 2 roads, the Eastern Central would feel constrained to build its own line to tidewater as the directors felt that the water terminal facilities should be improved and a more aggressive policy followed in developing rail and water routes over the Eastern Central.

After considerable negotiation, the Eastern Central Railroad made a proposition to acquire the Gray's Point road according to whichever of 3 plans seemed best to the directors and stockholders of the Gray's Point road. The Eastern Central would guarantee the interest on the bonds and guarantee 4% dividends in perpetuity on the stock of the Gray's Point road. Or, secondly, it would acquire the stock at \$72.50 a share, of which \$12.50 was to be paid in cash and the remainder in the 5% collateral trust bonds of the Eastern Central Railroad, secured by a deposit of the Gray's Point stock as collateral. Or, again, the Eastern Central would pay a lump sum of \$2,250,000 for the physical property of the road, out of which the Gray's Point directors must settle with their own bondholders and divide the remainder among the stockholders. In this event, the Eastern Central Railroad had planned to create a new issue of 5% bonds, to be secured by

a first mortgage on the property of the Gray's Point road and to be called the Eastern Central, Gray's Point Division first mortgage 30-year 5's. Symons and Company of New York had agreed to buy \$2,500,000 of these bonds at 90% in the event that they were issued.

Appended are the principal operating statistics of the Gray's Point and Heron Bay Railroad for a period of years, and balance sheet as of the first of the month preceding the offer of consolidation.

### BALANCE SHEET

<i>Assets</i>		<i>Liabilities</i>	
Cost of Road....	\$2,976,000	Capital Stock.....	\$1,000,000
		First Mortgage 4% Bonds....	1,000,000
		(27 years to run)	
Materials and		Second Mortgage 6% Bonds...	700,000
Supplies.....	37,469	(10 years to run)	
Cash.....	19,816	Bond Interest Accrued.....	10,000
		Material and Wages Accrued..	4,876
		Surplus.....	318,409
	<u>\$3,033,285</u>		<u>\$3,033,285</u>

Were you a director of the Gray's Point and Heron Bay Railroad, which offer would you vote to accept?

Which offer should Collinwood recommend to his fellow directors and stockholders that they should accept?

Which offer was, on the whole, the best for the interests of the Eastern Central Railroad?

\*69. There is a railroad extending west from Bowdoin, a city of 48,000 inhabitants, to Charlottestown, a railroad center of 12,000 inhabitants. The line is 134 miles in length, and has in addition 4 branch lines, aggregating 91.6 miles. One of the branches reaches into an important manufacturing center of Greensboro. Greensboro is on one of the main east-west lines of the Pennsylvania Railroad, so that the Bowdoin and Charlottestown Railroad gets only a small proportion of the desirable freight out of Greensboro. But at Charlottestown it connects with an important north-south line of the New York Central system. The latter does not reach Greensboro directly and uses the Bowdoin and Charlottestown Railroad and its Greensboro branch as its only way of reaching Greensboro. The amount of freight the New York Central turns over is considerable and the traffic contract with the Central is, on the whole, very profitable.

## OPERATING ACCOUNTS

	PRECEDING YEAR	YEAR BEFORE	YEAR BEFORE	YEAR BEFORE	YEAR BEFORE	YEAR BEFORE	YEAR BEFORE
Revenues							
Freight.....	\$429,992	\$398,889	\$351,983	\$390,790	\$312,885	\$288,665	\$272,614
Total.....	546,437	498,343	435,808	482,390	394,640	374,598	342,898
Operating Expenses...	381,058	326,986	289,986	317,981	275,564	264,139	226,356
Net Revenues.....	165,379	171,356	145,822	164,498	119,076	110,459	116,541
Taxes.....	24,393	16,366	14,466	15,874	13,494	13,309	10,142
Interest on Bonds.....	82,000	82,000	82,000	82,000	82,000	82,000	82,000
Dividends .....	50,000	50,000	40,000	40,000	0	0	20,000

The president of the Bowdoin and Charlottestown Railroad, Herbert Anderson by name, was an able railroad executive, well thought of in the locality. He was a friend of John O'Brien, the division superintendent of the Central located at Charlottestown. One evening in the winter of 1920-1921 O'Brien met Anderson on the corner of Main and Mercer streets in Charlottestown, and the following conversation ensued after the usual preliminaries.

*O'Brien:* Just been talking with Danny MacGregor, and he said they are up against it to meet their pay-roll. Blevins, he said, had gone up to Pittsburgh to see old man Peters. Guess the old shark is about through.

*Anderson:* If I'd buy the road suppose you could get me the same contract with the Central?

*O'Brien:* Sure, only you'd have to still call it the B and C.

*Anderson:* That's all right.

*O'Brien:* So long. Don't make a fool of yourself, and let old man Peters put it over.

*Anderson:* So long, Johnny. Don't worry about me. I guess Peters can tend his own chestnuts.

Ten days later Anderson sought out O'Brien at the latter's home and the following conversation ensued:

*Anderson:* Well, I've bought the Charlottestown and Western.

*O'Brien:* What's that!

*Anderson:* Johnny, old boy, when I was in school back in the old farm days in Wayne we had an old maid teacher, Mary Stebbins. We boys called her Stebby. One day I pulled Flossy Kennifick's pig tail. As I rode down to Pittsburgh last Thursday the train stopped at the Wayne station, and I looked across and saw the same little school house, and the children were running out at noon, and a little fellow chased a girl and pulled her pig tail, just as I did thirty years ago. And then the train moved and I didn't see any more, but when I pulled Flossy's hair old Stebby made me stay after school and copy a verse of poetry ten times. And the first line went, "There is a tide in the affairs of men," and the rest of it said something about taking advantage of opportunity. Then I got to thinking how little I'd made of myself and how much opportunity I'd had and all that sort of thing, and still the beginning of that poetry kept running in my mind. And when we got to Pittsburgh I could have done anything. I knew now was my opportunity. I'd have a real railroad. I'd be somebody instead of

pegging away with this old junk. And I hurried up to old Peters' office. He was alone, reading a newspaper. I broke right in:

"Mr. Peters, my name is Anderson. I'm President of the Bowdoin and Charlottestown Railroad."

"Yep," said Peters, "I heard Mr. Blevins speak of you."

"Well," I said, "I want to buy the Charlottestown and Western." The old shark looked at me a moment, then said: "It isn't for sale."

I said: "Very well, then, I'll wait until the receiver has it for sale." Thereupon Peters grunted and I made a motion to get out. The old man then said: "Well, suppose it was for sale, how much would you pay for it?"

I said: "Five hundred thousand dollars."

"Nothing doing!" said Peters. "I've got over a million in it now and I bought it from the Jordans and they dropped at least two million before."

"Well," I said, "I'll wait for the receiver." After a while the old shark asked me how much money I'd got. I said, I had a few thousand dollars with me, I could get forty thousand by the end of the week, and I'd agree to pay the rest in three months. Then he said I'd have to agree to take care of the debts. I said, "No, I wouldn't have to if I bought it of the receiver." Well, that's all there is to it. We signed a paper and he took my ten thousand dollars. I have a check for forty thousand dollars in my pocket now that Grace's father gave me.

But this is only the beginning. Yesterday I went to Crocket, the largest stockholder of the Bowdoin and Southern. He said he thought I could probably lease the road if I'd guarantee the old bond interest and pay a fair guaranteed dividend on the stock. And I've just secured from the widow of Jake Halloway, who owns a third of the Osterville and Eastern stock, an option at \$27 a share. Her lawyer said it was worth \$40. I said \$10 was a fair price, so we agreed on \$27. The lawyer said he could get at least two thousand shares more if I would agree to give at least \$27 a share. Now, Johnny, I want you to come in on this. You've worked for somebody else long enough. We can hit it off together. I'll put the thing through. Grace's father is going to get me some money in New York, and he promised to sell any bonds or stock I'd have. His bank has some correspondent bank in New York that buys railroad securities. You keep on working for the Central until after the consolidation is finished, and see to it that I get a good contract with the Central. Then you come as Superintendent of my road. I'll give you some stock same as I get.

The following represents in abbreviated form the operating and financial statistics regarding the roads to be consolidated:

	BOWDOIN AND CHARLOTTETOWN	CHARLOTTETOWN AND WESTERN	BOWDOIN AND SOUTHERN	OSTERVILLE AND EASTERN
Bonds.....	\$3,000,000	\$1,000,000	\$4,000,000	\$ 300,000
Common Stock.....	5,500,000	2,000,000	5,000,000	1,000,000
Unfunded Debts.....	200,000	117,000	1,350,000	214,636
Freight Receipts.....	1,310,315	285,684	1,918,711	370,437
Total Revenues.....	1,823,264	314,119	2,614,897	466,918
Operating Expenses...	1,268,144	302,916	1,613,532	364,707
Net Revenues.....	555,120	11,203	1,001,365	102,211
Taxes.....	52,666	11,817	61,817	17,610 <sup>1</sup>
Interest on Bonds....	180,000	50,000	220,000	15,000
Dividends.....	165,000	.....	300,000	20,000

<sup>1</sup> Including back taxes.

Prepare a plan of consolidation, including the tentative arrangements that Anderson stated he had made, such as to afford the basis for a successful operating railroad.

### Chapter XX—The Public Utility Holding Company

\*70. The city of Jefferson in Pennsylvania has a natural gas company, a street railway connecting Jefferson with Whitesboro in one direction and Gardner in the other, an electric company that supplies Jefferson with light and power, and finally, a municipally owned natural gas, electric station that supplies current for the street lights and light and power to the municipally owned water-pumping station and the public buildings. There are also small electric companies operating in Whitesboro and Gardner. The one in Whitesboro is owned by the same men who own the street railway. The electric lighting plant in Gardner is owned by the municipality.

James M. Jordan, the largest stockholder in the Jefferson Electric Company is approached by Edgar Herne, the owner of a majority of the bonds and upwards of 96% of the stock of the electric railway, who suggests the formation of a consolidation to acquire and operate all the public utilities in Jefferson, Whitesboro, and Gardner, except the municipally owned water supply companies. Herne had previously secured an option on the municipal lighting and power plant of Jefferson for \$100,000 carrying with it an equable contract between the city and the purchasers for supplying the city lighting and power. Herne had secured, also, an option on the Gardner municipal electric plant, doing both municipal and com-



mercial business; this required \$25,000 in money, provided the purchasers will supply 24-hour service in Gardner at the same rates as should be at any time charged in Jefferson. The service had theretofore been poor and expensive; the plant was antiquated and costly to maintain.

The following represent the chief operating and financial statistics:

	JEFFERSON ELECTRIC COMPANY	JEFFERSON RAILROAD COMPANY	JEFFERSON GAS COMPANY	WHITESBORO LIGHTING COMPANY
<b>Financial</b>				
Bonds.....	\$612,000 (5%)	\$ 500,000 (5%)	\$200,000 (5%)	\$64,000 (4½%)
Notes.....	400,000 (6%)	300,000 (7%)	.....	.....
Preferred Stock.....	150,000 (6%)	.....	.....	.....
Common Stock.....	550,000	1,000,000	200,000	100,000
<b>Operating—Average for Five Preceding Years—even 000</b>				
Gross Revenue.....	184,000	211,000	165,000	24,000
Operating Expense...	118,000	171,000	120,000	16,000
Net Earnings.....	66,000	40,000	45,000	8,000
Bond Interest.....	24,000	25,000	10,000	3,000
Note Interest.....	6,000	8,000	.....	.....
Dividends.....	.....	.....	20,000	.....
<b>Preceding Year</b>				
Gross Revenue.....	216,000	206,000	185,000	27,000
Operating Expenses...	144,000	180,000	142,000	23,000
Net Earnings.....	72,000	26,000	43,000	4,000
Bond Interest.....	31,000	25,000	10,000	3,000
Note Interest.....	16,000	21,000	.....	.....
Dividends.....	.....	.....	20,000	.....

There were no accounts kept for the municipal plant at Jefferson. It had cost originally, 12 years before, \$117,000. No depreciation had been charged.

The municipal plant at Gardner collected \$31,000 in commercial revenue, during the preceding year, and no charge was allocated to the town. It cost to operate \$47,000.

Herne wanted to form a general consolidation. Jordan refused, alleging that a general consolidation of all the properties would destroy the old and valuable franchise rights of the Jefferson Electric Company. This, however, was not his real reason. Finally, Herne consented to the organization of a holding company, to be incorporated under Delaware laws, to hold the stocks of the operating companies.

What was probably Jordan's real reason for refusing to co-operate in the organization of a direct consolidation? Prepare the financial plan of the holding company, indicate the equitable means for acquiring the operating subsidiaries and, finally, prepare letters to go to the security holders of the Jefferson Electric, Jefferson Gas, and Jefferson Railroad Companies and the Whitesboro Electric Company.

**\*\* 71.** Edward Blake was born in Stoughton, Massachusetts, in 1876. After having been graduated at the high school, he entered the Massachusetts Institute of Technology, earning his way through by working for the local telephone company and by the aid of scholarships. He was graduated second in his special study of electrical engineering. In 1900 he went to Schenectady in the employ of the General Electric Company. In 1905 he became Superintendent of their small motor assembling room; in 1907 he left the employ of the General Electric Company to become Superintendent of Construction for one of the largest of the American Light and Traction subsidiaries. In 1911 he resigned from the employment of Emerson Macmillan, and became a construction engineer with the American Gas and Electric Company. In 1915 James L. Brewster and Company, bankers in Boston, received a report from a local correspondent in Canton, Ohio, that a young engineer with a good record had secured the financial backing of James Eustis, owner of a large machine shop, in his project to acquire a group of small widely separated utilities to be operated under one management. Brewster had been a member of 5 or 6 syndicates for the sale of holding company securities, all of which had turned out very profitably. His firm, lured by these profits, was then planning to organize a holding company, but was at a loss to know how to go about it.

On receipt of the report from Canton, Nathan Miles, the junior member of the partnership, went to Canton, interviewed Blake, and arranged that he should come to Boston immediately with complete details of all the work he had done in connection with his projected holding company.

After investigation, the Brewster firm agreed to back Blake in his undertaking, provided Blake showed that the properties he should acquire warranted financial support by reason of their inherent earning capacity and the probable future development of the communities they served.

Brewster laid down the following principles as the conditions to govern Blake in the acquisition of the options:

1. The localities served must show substantial increase in population from 1900 to 1910.
2. The communities must be progressive and public spirited.

3. The franchise situation must be sound.
4. The prices to be paid for the properties must include all the securities and debts, so that the bonds to be issued upon them and sold by Brewster should be absolute first liens, that is, there should remain no outstanding underlying liens.
5. The net earnings of the properties during the preceding year should be at least 12% of the total cash price to be paid. And the improvements necessarily made during the first year should increase, in the judgment of Blake, the net earnings during the second year by at least 15% of their cost.

The Brewster firm laid down no other imperative conditions, except that they recommended that Blake limit himself to electric light and power properties, and suggested that no southern or far western companies be acquired until after Blake had built up an operating organization.

Blake spent the summer of 1913 traveling about the country investigating electric properties. On September 18, he reported concerning 6 small companies. The following represents an abbreviated outline of his report.

Hudson, Ohio. County seat. About 8,100 inhabitants. Condensed milk factory. Distributing center of a large and rich agricultural section. Population shows slight increase. Deposits in local banks doubled from 1905 to 1912. Local board of trade have recently completed arrangements enabling a large evaporated milk company to build a factory here. Citizens are donating the site and exempting company from local taxation for period of 7 years. Plant will employ 500 men and women.

Electric light plant antiquated. Three upright boilers, belt and shaft connection with one 100 k. v. a. generator and two Westinghouse 250 k.w.—2200 v. Distributing system good. Customers concentrated, ample transformer capacity, and large secondary.

Outskirts of town not served. \$16,000 should be spent on extending distributing system immediately. Within a year new boilers and a steam turbine should be installed, at cost of at least \$40,000.

Marysboro, Ohio. Important agricultural center north of Columbus; about 4,000 inhabitants. Three small manufacturing units. A fourth has just moved its plant away from Marysboro on account of labor shortage, poor power and dissatisfaction with the C. C. C. and St. Louis on account of l. c. l. rates on its finished product. Very great wealth among the surrounding farmers. Large proportion of inhabitants represent retired farmers who have "moved to town." Sleepy atmosphere; place requires an energetic board of trade.

Electric light plant consists of 3 antiquated, inefficient upright boilers. There is a fourth boiler which the local manager called "reserve," which might be fired provided it was sufficiently "doctored up." One excellent, belt-connected 500 k.w. Westinghouse generator. One 250 G.E. unit, apparently about 6 years old, which the manager said had been bought second-hand. Two 100 k.v.a. machines, evidently rebuilt, which manager said had not been run for 2 years.

There is an artificial ice plant in the same building. Manager said there was a profitable demand for at least twice the ice capacity of the plant during summer. Storage facilities very limited. Considering, however, the inefficiency of the boilers, it is unquestionably true that the ice business is not as profitable as accounts seemed to indicate. Could be made a profitable business provided new boilers installed and the storage capacity at least doubled.

Distributing system fair. Business well developed. Some new business could be secured by running line to Petoria, a small railroad junction point to the north.

Only imperative improvement would be new boilers; cost about \$15,000.

Cory, West Virginia. Railroad and mining center; 9,000 inhabitants. Town overgrown. Population largely foreign born, ignorant, receiving excellent wages. Retail liquor sales, according to bank report, \$165,000 last year. Schools poor; attendance poor.

Company already distributes electricity to Argentine, across the river, and to 4 large coal mines just back of Argentine.

Company has a thoroughly modern plant on bank of river, to which coal is conveyed by gravity, overhead trolley conveyer from mouth of coal mine 125 yards distant. Very favorable coal contract; 65 cents delivered to the company's bunkers. Equipment consists of 4 horizontal tubular boilers, superheater, one 750 k.w. G. E. turbine, installed 4 months before, two 500 k.w. Westinghouse units belt driven from somewhat antiquated steam engine. These were held as reserve until last April, but now used to carry load during daytime. Company now installing one 1,500 k.w. G. E. turbine. Within a year must add 2 new boilers at expense of at least \$25,000.

Electricity supplied chiefly to coal mines at 2,200 v. Load factor unusually good. Company makes little effort to develop domestic business and little secondary.

Summit, Maryland. About 14 miles west of Baltimore. Town of 4,000 inhabitants; only industry, 2 large cotton duck mills belong to a "trust" apparently always in financial difficulties. Labor poorly paid.

Mills themselves obtain part of their power from their own water power development, part from 2 antiquated steam plants. During last 3 years have been buying an increasing proportion of power from electric company. Always in arrears on power bills. Twice in the last year the electric company pulled the cotton mill switch because of non-payment of power bills. Once filed attachment on cotton in warehouse. Bills always finally paid, but situation annoying and likely to lead to trouble.

Electric company has modern hydroelectric development 4 miles back of town. This generates all electricity needed during 7 months of year. During 3 of remaining months an antiquated steam station is used while the cotton mills are in operation. During the remaining 2 months the steam station supplies from  $\frac{1}{2}$  to  $\frac{3}{4}$  the electricity required and is taxed to the utmost. Company now negotiating a contract with the Consolidated interests of Baltimore to enable it to purchase auxiliary current. If this contract is consummated, probably advisable to scrap the steam station. Cost of transmission line, 13,000 v., to the Consolidated substation \$27,000. Scrap value of steam station probably \$8,000. Distributing system ample. No extensions need be built for a year at least.

Hamilton, New York. Main line New York Central, Albany to Buffalo, 7,000 inhabitants. Very little manufacturing, except local milk powder factory and cheese factory. These inefficient and managed largely by farmers. Located in center of very prosperous and rich dairying country. Farmers rich and not very progressive. Electric light company allowed to go to seed. Chief, if not only, stockholder lives in Jamestown and takes no interest whatever in company. Owns and operates a small factory for the manufacture of mahogany furniture; this has been a losing proposition and has required all his time and attention. Would sell out the entire electric light plant free from all debt, provided cash is forthcoming within 30 days. Plant consists of 3 small horizontal boilers. Two utterly unfit, and insurance will not be available after the first of year. Plant has some old d. c. generating machinery. On the whole, plant so inefficient and badly located that would not pay to patch up. The transmission line of a large hydroelectric company runs within 30 miles. On the way are 3 small hamlets, without electric service and one town of 1,500 inhabitants, having a locally owned electric light company which generates by a gas engine. No option on this company, but current could be sold to it at wholesale. Cost of transmission line, including right of way transformers and substation, \$92,000. The hydroelectric company will loan half of the cost, provided the loan is secured by a specific lien on the transmission line.

Distributing system in town poor. About \$11,000 should be expended

on it immediately. About half the houses are wired. Few appliances used. Bank deposits nearly 3 times the average per capita for rural New York. Few families moving into the town. Population shows 4% increase from 1900 to 1910. Rate less than that now.

Situsville, Pennsylvania. Seventy-five hundred inhabitants. In center of original oil fields. Served by branch lines of the Pennsylvania and New York Central. Several oil refineries, 2 steel mills, and 4 or 5 smaller industries. Served by natural gas. City has its own electric station and owns and operates the street lighting.

Plant consists of series of gas engines, of an aggregate of 450 k.w. capacity. Gas purchased at 21 cents per M. Switchboard cost very low, only about .78 cents per k.w.h. including repairs to engines but without depreciation. Load factor fair. Could be very much improved if company could install at least 250 k.w. additional generating capacity and supply the largest of the steel mills, operating 24 hours a day, with power. Improvement would cost \$12,000. Steel company will pay a flat energy charge of 1.7 cents for a minimum of 750,000 k.w.h. for the first year. Steel mill would pay for its own line to the company's switchboard, but would have to be assured of adequate available power.

Large number of domestic customers. Town has unusually large proportion of wealthy men; fathers or grandfathers made fortunes at time of early exploitation of oil industry. Second and third generation live in large, ostentatious houses on hill to northwest of town. Some public-spirited men among this class, but majority spend considerable portions of year away and are inclined to forget Situsville and oil.

The financial and operating statistics of these 6 companies are given in tabular form on the next page.

After careful consideration James L. Brewster and Company arranged to acquire 5 of the properties held by Blake under option, but rejected the sixth because least desirable. Which was it and why?

Prepare a financial plan for the Interstate Lighting and Service Company, and a brief descriptive circular such as might be submitted to investors.

## Chapter XXII—Financing of Extensions from the Public

72. In 1892 the Hamilton, Morristown and Eastern Railroad issued \$3,000,000, 6% first mortgage bonds, callable at 105 and due in 1942. In 1903 general interest rates on medium-grade railroad bonds had so fallen and the credit of the Hamilton, Morristown and Eastern Railroad had

DATA COVERING THE INTERSTATE LIGHTING AND SERVICE COMPANY

	HUDSON	MARYSBORO	CORY	SUMMIT	HAMILTON	SITUSVILLE
Bonds.....	\$100,000 (6%)	\$ 25,000 (5%)	\$629,000 (5%)	\$150,000 (6%)	.....	\$90,000 (5%)
Notes.....	.....	15,000 (6%)	.....	35,000 (6%)	.....	20,000 (4%)
Stock						
Preferred.....	.....	.....	75,000 (6%)	.....	.....	.....
Common.....	245,000	200,000	500,000	300,000	\$200,000	200,000
Plant Account.....	371,000	185,000	810,000	290,000	285,000	131,000
Depreciation.....	27,000	.....	.....	.....	.....	39,000
Number Customers						
Domestic.....	530	218	784	390	395	614
Small Power.....	27	9	13	33	.....	42
Large Power.....	.....	.....	9	2	.....	4
Street Lights.....	25	15	31	16	19	48
Earnings: Average						
Three Year, Gross...	68,000	31,000	101,000	78,000	41,000	87,000
Operating (incl. taxes)	33,000	18,000	54,000	42,000	30,000	64,000
Preceding Year						
Gross.....	72,500	33,000	181,000	83,000	46,000	93,000
Operating (inc. taxes)	34,500	21,000	89,000	47,000	38,000	72,000
Price of Option (including detail of terms)...	(a)	(b)	(c)	(d)	(e)	(e)

(a) \$70 a share for common stock. Stockholders would agree to deliver bond issue at not over 96 for entire issue. Company has \$31,000 in treasury and owes nothing on current bills except \$525 on supplies not yet delivered.

(b) \$25 a share for common stock and par for notes. A few of the bonds might have to be called at 105%. Option on \$11,000 at 84. (c) Par for bonds and preferred stock—less 3% discount on entire amount if money paid before Nov. 15. All but 100 shares of common stock thrown in. This remaining 100-share lot would cost at most \$25 a share.

(d) \$30 a share for common stock, par for notes. Most of bonds would have to be obtained by calling issue at 103. Perhaps a ¼ to ½ might be bought at par.

(e) The 4% bonds mature in 4 years. Par would have to be paid for them if bought. Owners agree to supply all the 5% bonds for 90. They will take either \$50 a share for stock or take \$65 in 5% new bonds of holding company, if such are issued.

so improved, that the treasurer found it possible to sell long-term (hundred-year) first mortgage 4% bonds at 90.

Determine whether or not it was expedient for the treasurer to redeem the earlier issue of bonds by means of a new issue.

73. The Consolidated Light and Power Company was formed in 1916 as successor, by consolidation, of three small electric and gas companies. These latter had outstanding the following underlying issues:

City Gas Company, first mortgage 6's, 1928, \$438,000. Callable at 105, and having a current market price of 102. Approximately \$307,000 are held by three local interests who promise to deliver their bonds to the new company for 103 in money, or to refund them into the new 5% bonds, presently to be described, at 80 for the new bonds and 105 for the old bonds. The remaining \$131,000 will probably have to be called.

Consumers Electric Light Company, first mortgage 5's, 1941, \$600,000. Callable at 101 and having a current market price of 91½. The bankers who originally placed these bonds stand ready to acquire and deliver to the company the entire issue for 97½ in cash.

Merchants Electric Light and Power Company, first and refunding 5's, a second mortgage on the electric central and distributing system, subject to the lien of Consumer's first 5's next above mentioned. Due 1945, \$1,400,000 outstanding. Callable at 102½. Current market price 84. The company has an option on \$500,000 of these bonds at 85 in cash. There is every reason to believe that at least two-thirds of the remainder of the issue will be exchanged for the new 5% bonds, provided the company offers a bonus of 10% in the new bonds. The remainder will probably have to be called.

Bankers stand ready to buy all or any part of a new issue of \$5,000,000, 5% 40-year bonds at 82½, provided the mortgage be drawn so as to stand as a first lien on the entire property of the gas and electric light company.

What is the maximum amount of money the company would receive from the entire issue of new bonds?

#### Chapter XXIII—New Capital from Sales of Stock—Particularly to Stockholders

74. The stock of the Stuart Manufacturing Company was selling for \$131 a share at the time the total capitalization was represented by \$3,000,000 of common capital stock. The stock was doubled in the spring of 1917, the old stockholders having been given the privilege of subscribing to the new stock at par.

What was the probable value of the right adhering to each old share?



75. The stock of the American Telephone and Telegraph Company was quoted at 145. The company offered the holders of every 5 shares the right to subscribe to one new share at \$100 a share.

Granting that there was no relative change in the market price of the stock, in the period during which the stockholders were privileged to subscribe, what would be the market price of the stock after the expiration of the subscription period? / 37.50

76. In March, 1922, the Hartford Fire Insurance Company increased its capital stock from \$4,000,000 to \$8,000,000 by allowing the old stockholders to subscribe to the new stock at par, in proportion to their holdings. The rights adhering to the old shares had a current market quotation of \$230 each.

What was the value of a share of the company's stock before the increase in capitalization?

77. At a certain time in its history the United Fruit Company, the stock of which was then selling at \$188 a share, declared a cash dividend of \$10 a share. The stockholders could, however, use this dividend to subscribe to new stock at par. Cash could not be used for such subscriptions.

What was the value of the United Fruit Company's stock after the payment of the dividend of \$10, granting that the general level of stock market prices had not changed in the meantime?

### Chapter XXVI—Railroad Reorganization

78. The Eastern Valley, Sumpter and Southern Railroad has outstanding the following securities:

Sumpter Division (Main Line), First Mortgage Bonds 6%.....	\$1,000,000
Sumpter Division (Main Line), Second Mortgage Bonds 5%....	500,000
First Mortgage Bonds 4%.....	4,000,000
Debentures 5%.....	2,000,000
Branch Line First Mortgage Bonds 7%.....	300,000
General Mortgage Bonds 5%.....	3,000,000
Income Bonds 6%.....	1,500,000
First and Refunding Mortgage Bonds (open end issue) 5%....	2,600,000
First Preferred Stock 4%.....	6,000,000
Second Preferred Stock 4%.....	2,000,000
Common Stock.....	10,000,000

*Strong*

Its operating account during the year ending June 30, 1914, was:

Gross Revenue from All Sources.....	\$2,228,000
Operating Expenses, Including Maintenance.....	1,492,000
Taxes.....	37,000
Improvements and Betterment.....	49,000

What capital payments may or should the corporation make?

79. The Western Mississippi Railroad had outstanding \$3,000,000 prior lien 5% bonds and \$3,000,000 cumulative income 6% bonds. The latter were cumulative from January 1, 1917. In 1917 the corporation paid 2.85% on the income bonds. The income and expense account for 1918 stood as follows:

Total Operating Revenues.....	\$1,354,748
Maintenance of Ways and Structures.....	126,738
Maintenance of Equipment.....	189,854
Transportation.....	427,877
Traffic.....	33,825
General Expenses.....	44,797
Taxes.....	84,665
Uncollected Revenue.....	513
Income from Rentals.....	16,271
Interest and Dividend from Subsidiary Companies.....	5,598
Miscellaneous Non-Operating Receipts.....	1,302
Hire of Equipment, Dr.....	7,740
Rentals, Dr.....	14,508
New Construction.....	82,617
Purchase of Ferry-boat.....	17,016
Insurance.....	1,871
Stokes Hill Cut Off.....	31,612

What percentage, if any, should be paid on the income bonds for 1918?

\*80. (Names, figures, and places altered.) The Sunboro and Eastern Pennsylvania Railroad passed into the hands of receivers on August 10, 1914. The road had been suffering from a combination of maladies for a period of over 7 years. During this time the gross earnings had risen from \$7,614,000 to \$12,143,000, while the operating expenses had risen from \$5,396,000 to \$11,134,000. The experience of these 7 years may be seen at a glance from the following tables:

## YEAR ENDING JUNE 30

(ooo omitted)

	1908	1909	1910	1911	1912	1913	1914
Gross Earnings.....	\$7,614	\$8,713	\$9,112	\$11,318	\$10,792	\$11,516	\$12,143
Maintenance.....	2,403	2,617	2,319	2,732	3,019	2,991	2,711
Other Operating Expenses, including Taxes	2,993	3,380	4,176	6,515	6,007	7,166	8,423
Total Operating Expenses.....	5,396	5,997	6,495	9,247	9,028	10,157	11,134
Net.....	2,218	2,716	2,617	2,071	1,764	1,359	1,009
Interest Charges.....	1,015	1,015	1,015	910	970	1,030	1,030
Operating Ratio.....	71%	69%	72%	82%	84%	88%	92%

At the time of the failure, August 10, 1914, there were outstanding the following funded liabilities:

1. Sunboro and Harrisfield first mortgage 7's. Issued 1880, due in 1910 and extended at 5% to 1960. A first mortgage on the main line extending between the two terminals of the railroad, 264 miles. \$6,738,000 outstanding. Mortgage closed.

2. Sunboro and Harrisfield, second mortgage 6's. Issued in 1885, due in 1945. \$1,816,000 outstanding. Mortgage closed. Secured by the same property as the first mortgage 7's but junior to it.

3. Dobbinsville Division. First 6's. Issued in 1891, due in 1921. A first mortgage on the branch line from Mason Junction to Hartford's, 68 miles. \$710,000 outstanding. Mortgage closed. This branch reaches important coal properties, and originates about 60% of the coal traffic of the road. The total coal traffic represents about 53% of ton miles handled by the road.

4. Sunboro and Eastern Pennsylvania Railroad first mortgage 5% gold bonds. Issued in 1898 and due in 1938. A lien on 687 miles of line subject to the two preceding issues on the main line and to the Dobbinsville divisional bonds. \$5,750,000 outstanding. Mortgage closed.

5. Sunboro and Eastern Pennsylvania Railroad general mortgage 5% bonds. Secured by the same property as the preceding (first mortgage 5's) but subject thereto. \$10,000,000 authorized. \$2,685,000 outstanding. Issued in 1903 and due in 1953.

6. Debentures. \$2,000,000 6's. Issued in 1912, due in 1922.

7. There were outstanding \$1,260,000 of 4% equipment obligations. The amount was originally \$1,800,000 issued in 1911 to purchase approxi-

mately \$2,000,000 of steel coal cars. The contract, issued under the Philadelphia plan, with the Ferrard Trust Company, owner and lessor, called for annual instalment payments of \$180,000. These had been met regularly. The interest on the outstanding certificates had been regularly charged to operating expenses.

In addition the company had the following obligations outstanding:

Merchandise debts contracted before February 10, 1914, \$773,000.

Current merchandise debts contracted since February 10, 1914, \$216,000.

Current pay-roll, salary and other labor charges, \$69,000.

Bank loans maturing before September 1, 1914, \$100,000.

Bank loans maturing before January 1, 1915, \$60,000.

Bank loans maturing after January 1, 1915, none.

The stock issues were represented by \$5,000,000 6% non-cumulative preferred and \$5,000,000 common stock.

On August 25, 1914, the receiver obtained permission to issue \$500,000 par value 2-year 6% receivers' certificates, ranking, prior to the Sunboro and Eastern Pennsylvania general mortgage bonds. These were sold for 98 to banks and the proceeds used to pay the current merchandise bills of \$216,000 and the unpaid pay-roll of \$69,000. The remainder was expended in the next 8 months in repairs, betterments, and general improvements.

Another issue of \$180,000 was made in February, 1915, in order to meet the annual instalment on the equipment trust obligations.

The receivers' report for year ending June, 1915, showed the following:

Gross Earnings.....	\$11,978,000
Maintenance.....	5,112,000
Other Operating Expenses Including Taxes.....	6,224,000
Net Earnings.....	642,000

The receiver admitted in his report to the general reorganization committee that at least 35% of the maintenance charges were extraordinary due to the previous protracted period of under-maintenance.

It was also clear that the falling off of gross earnings was due to the depression consequent upon the Great War. During the 6 months of the year from June 30 to December 31, 1914, the gross earnings had been approximately \$4,800,000, in comparison with approximately \$7,100,000 for the last 6 months of the fiscal year. The receiver reported that, because of previous liberal charges to maintenance, he was able to show a net operating ratio for the 4 months from May 1, 1915 to August 31, 1915 of 7% below that of the fiscal year ending June 30, 1914.

In September, 1915, the General Reorganization Committee prepared a plan of reorganization. What plan would you suggest?

## GENERAL COMMENT AND SOLUTION

### PAST HISTORY

From an inspection of the earnings and statements of the Sunboro and Eastern Pennsylvania Railroad from 1908 to 1914 three things are obvious:

1. The road has not obtained a normal increase in gross earnings. The year ending June 30, 1908 was a year of depressed railroad earnings following the monetary panic of the autumn of 1907. The steady increase in gross earnings from 1908 through 1911 is therefore readily understandable, perfectly normal, and not indicative of either remarkable prosperity or able management. But from 1911 through 1914 the gross earnings were stationary. The railroad, operating in the thickly settled sections of the eastern states, should have shown a steady and uninterrupted increase in gross earnings. The fair presumption, therefore, is that the road, by reason of inefficient management, was losing business to its competitors.

2. The total operating expenses and operating ratio have both increased relatively and absolutely. In 1908 the total operating expenses were \$5,400,000 out of a total gross of \$7,600,000, or a ratio of 71%. This ratio remained relatively constant for the next 3 years; it then rose steadily so that in 1914 the total operating expenses absorbed 92% of the total gross earnings. Obviously the increase in cost of operation was all out of proportion to the increase in gross earnings. Should the same relative increases continue, the costs of operation would presently exceed the total receipts of the road.

3. Although the total operating expenses have increased relatively and absolutely, the maintenance component of the operating expenses has decreased. This is easily observable from a few comparisons.

	1908	1911	1914
Total Gross.....	\$7,614,000	\$11,318,000	\$12,143,000
Total Maintenance.....	2,403,000	2,732,000	2,711,000
Total Operating Expenses.....	5,396,000	9,247,000	11,134,000
Percentage of Maintenance to Gross	32%	24%	22%
Percentage of Maintenance to Total Operating Expenses.....	45%	30%	25%

Clearly, and without question, the management had been spending much less comparatively in the up-keep of the road. Had the same relative proportion of gross earnings been expended in 1914 for maintenance as in 1908, the 1914 maintenance charges would have been over \$3,880,000 and the total operating costs would have exceeded the gross earnings.

### THE BASIS OF THE REORGANIZATION

Clearly then the reorganization must be a drastic one. It must provide at least \$680,000 in money with which to pay off the receivers' certificates and should provide, in addition, some money to improve further the physical condition of the road. It would be well, also, to secure the money requisite to meet the instalment due in February, 1916, on the equipment certificates. Some, at least, of the expenses of the reorganization would have to be met in money. Altogether \$1,000,000 should be secured.

The second requisite of any reorganization plan would be a reduction in the fixed charges. According to the statements of the company the railroad had succeeded in earning its fixed charges during all the years except the one immediately preceding the receivership. Yet, by analyzing the decrease—absolute and relative—of the maintenance charges, it is obvious that this apparent solvency was due to marked failure to maintain adequately the physical condition of the road.

During the year of receivership, when the charges to maintenance were clearly and admittedly overliberal, the purpose of the receivership being to make up for the delinquencies of the past, the road showed net earnings of \$640,000. The interest charges on the two underlying main line bond issues required \$445,860. It is obvious therefore that these two issues cannot be disturbed, or if they are disturbed new securities equal in value and attractiveness must be given to the old holders. The balance of earnings over these underlying charges is about \$200,000. The interest on the Dobbinsville branch bonds amounts to \$42,600. This branch is very important to the present organization of the Sunboro and Eastern Pennsylvania Railroad. The operating and financial structure of the road had been, during the preceding 4 or 5 years, recast so as to accommodate a large coal traffic. A very large proportion of this traffic originated on the Dobbinsville branch. It would be, therefore, a very serious mistake to jeopardize the ownership or control of this branch as a result of an attempt to disturb the small issue of \$710,000 first mortgage bonds, with interest charges of only \$42,600.

The two underlying main line, and the Dobbinsville branch bonds

absorb \$488,460 of the \$642,000 available earnings. This would leave earnings of only about \$153,000 with which to meet the interest on the Sunboro and Eastern first mortgage 5's. This interest amounted to \$287,500. On this showing it is obvious that all the junior mortgage and debenture bondholders must be prepared to endure some sacrifice, both in lien on income and on the "corpus" or property of the road.

Furthermore, the money required by the reorganization, \$1,000,000 in cash, must be obtained from the junior security holders, presumably the stockholders. So that the crux of the problem of the reorganization becomes a kind of "give and take" between the junior bondholders and the stockholders.

### THE PLAN

One of two plans might be adopted. Either all the security holders, including the owners of the underlying bonds, might agree to a thorough and comprehensive reorganization in which an entirely new and much simplified financial structure would be created out of the old one, or the holders of junior securities might decide upon a reorganization in which only the junior securities would be disturbed, the underlying bonds to remain as they are. The former alternative would require the consent and active co-operation of the senior bondholders—and therefore would be more difficult to execute—but it would at the same time produce a more permanent and stable financial structure. The second alternative would be quicker, easier, and less expensive to execute; it would, however, merely ameliorate the present distress without effecting a thorough and abiding cure. The decision would, in the end, rest with the senior bondholders. If they were well organized and showed a willingness to co-operate, it would be wise financial policy to effect a general reorganization involving the refunding of all the securities; if they were scattered, unorganized, and showed little interest in the fortunes of the road, it would be foolish to do more than fund the current debt and reduce the charges on the junior bonds.

We will assume, for purposes of argument and discussion, that the active co-operation of the senior bondholders can be gained and that all parties concerned desire a comprehensive reorganization. To this end, the following securities are created:

1. First mortgage 5% bonds, a first and only lien on the entire mileage and equipment of the Sunboro and Eastern Pennsylvania Railway, subject only to the lien of the equipment certificates on certain of the rolling stock. Due in 1960. Authorized \$20,000,000. Issued \$11,564,000. The unauthorized balance to be issued only for the actual cash cost of improve-

ments and then only when the net earnings are twice the interest charges on the entire outstanding first mortgage bonds, issued and to be issued.

2. Preferred stock 6% non-cumulative. Protected by a provision which prevents the further issue of preferred stock without the consent of 75% of the outstanding preferred stock. Authorized and issued \$10,797,900.

3. Common stock. Authorized and issued \$10,846,500. Exchange of the old securities into the new securities. Basis as indicated in the table.

### DISCUSSION OF PLAN

It has been said already that the 2 underlying mortgage liens of the Sunboro and Harrisfield must be fully protected. In the plan just outlined the two bond issues are given the same consideration. This is just. The 5's represent a closed prior lien on the whole property. They are given a bonus of 10% in the new preferred stock as an inducement to accept bonds issued under a new open general mortgage covering the entire property. The new bonds will be more easily marketable than the old bonds, but not as secure. The fixed interest return will be the same, but in addition—through the bonus of preferred stock—the holders are given an opportunity to share in the future prosperity of the road. If the road continues a failure the new bonds will not, probably, command a market below the old bonds; if it is a success the market value of the new bonds together with the preferred stock bonus will be greater than that of the old bonds. The holders will have, therefore, something to gain, and nothing to lose by the exchange.

The same policy is pursued regarding the second mortgage 6's. They represent a small second closed lien on the main line, so that their security is a little less—but only a little less—than the first mortgage 5's. The slightly less security is fully compensated for by the 1 per cent greater income return. For purposes of exchange therefore the two issues are regarded as of the same intrinsic value.

The Dobbinsville branch bonds occupy a very strong strategic position in the whole financial structure. As organized, the loss of the branch would do great injury to the road; and the bondholders, were they allowed to foreclose and take the property for themselves, could easily make a satisfactory operating or traffic agreement with some other road, owing to the large volume of coal tonnage which originates on their line. On the other hand the bonds represent a small, practically unmarketable issue. Under any circumstances they would be poor collateral at the banks. They mature in 5 years, so that the holder, in exchanging them for new 5% bonds



## REORGANIZATION PLAN OF THE SUNBORO AND EASTERN PENNSYLVANIA RAILROAD

Old Security	Amount	Assessment to be Paid		New Securities				Common Stock	
		%	Amount	First Mortgage Bonds		Preferred Stock		%	Amount
				%	Amount	%	Amount		
S. and H. 1st.....	\$ 6,738,000	..	.....	100	\$ 6,738,000	10	\$ 673,800	..	.....
S. and H. 2nd.....	1,816,000	..	.....	100	1,816,000	10	181,600	..	.....
Dobbinville.....	710,000	..	.....	100	710,000	..	.....	10	\$ 71,000
S. and E. 1st.....	5,750,000	..	.....	40	2,300,000	80	4,500,000	..	.....
S. and E. Gen.....	2,685,000	..	.....	..	.....	50	1,342,500	50	1,342,500
Debentures.....	2,000,000	..	.....	..	.....	..	.....	100	2,000,000
Old Debts.....	773,000	..	.....	..	.....	..	.....	100	773,000
Bank Loans.....	160,000	..	.....	..	.....	..	.....	100	160,000
Preferred Stock.....	5,000,000	10	\$ 500,000	..	.....	70	3,500,000	30	1,500,000
Common Stock.....	5,000,000	10	500,000	..	.....	10	500,000	100	5,000,000
Totals.....	\$30,632,000		\$1,000,000		\$11,564,000		\$10,797,900		\$10,846,500

would lose at most 1% a year or 5% in all. Considering that the security of the new first 5's, covering the entire road, is equal to that of these branch line bonds, while the former have greater marketability, we may properly assume that a bonus of 10% of new common stock fully compensates for a loss of 1% in income for a period of five years.

By reference to the earnings of the road under the receiver it is obvious that interest charges on the \$5,750,000 Sunboro and Eastern first 5's were not earned. (Earnings available after charges on the underlying bond issues [even 000], \$153,000, interest on the first 5's, \$287,500.) Yet the receiver admits that 35% of the maintenance charges, or \$1,789,000, were abnormal. If even a small proportion of these maintenance charges had been capitalized the interest of the Sunboro and Eastern first 5's would have been fully earned. Reasonable precaution dictates, therefore, that part of the charges on this issue shall be made contingent, yet the bondholders would feel, justly perhaps, that they should not be called upon to make any real sacrifice. This predicament would be settled by giving these bondholders new bonds carrying fixed charges of \$115,000 (40% of new first 5's or \$20 for each \$1000 old bond, 2%) or nearly the balance of earnings available under the receiver's earning statement, together with a very liberal bonus of new preferred stock. They would, therefore, be in a position to receive the full available earnings if the road made no improvement, but if the earnings were liberal they would receive an additional contingent income of \$276,000 (80% of new preferred stock or \$48 for each \$1,000 old bond—4.8%). This, with the fixed income, would give them 6.8% instead of 5%.

In other words, they endure a reduction in fixed income, but are compensated by an increase in fixed and contingent income.

The efforts to meet the interest charges on the general mortgage 5's and the debentures precipitated the failure. The only way of safeguarding the reorganized road from a recurrence of the same misfortune is to eliminate entirely these fixed charges. This must be done, whatever else is accomplished by the reorganization. But obviously the general mortgage bonds are in a stronger position than the debentures—hence the former are given part preferred stock, and part common, while the latter are given only common stock. The unfunded debt, both the merchandise and the bank loans, are considered on the same level as the debentures.

It is necessary to raise \$1,000,000. The preferred stockholders cannot be relied upon to come to the rescue of the failed road any more or any less than the common shareholders. The burden of raising the new money is therefore distributed evenly among all the stockholders. The preferred

stockholders, in deference to their position, are given new preferred stock for part of their old preferred, whereas the common shareholders are given new preferred only for the par value of their assessment.

A comparison of the old and the new corporation is seen from the following table:

	OLD COMPANY	NEW CORPORATION
Total Capitalization Including Unfunded Debt, but not Undisturbed Equipment Obligations.....	\$30,632,000	\$33,208,400
Fixed Charge Securities.....	19,699,000	11,564,000
Fixed Charges not Counting Unfunded Debt.....	1,030,210	578,200
Fixed and Contingent Charges.....	1,330,210	1,226,074

It is obvious from this table that the reorganization has accomplished a distinct reduction in the fixed charges; in fact the fixed charges are below the earnings during the poorest period of the receivership, when the business was suffering from a general depression and when the receiver had, admittedly, increased the normal maintenance by over \$1,000,000. The fixed charges were, in fact, only a little over half the net earnings of the year just prior to the failure. In addition to a reduction in fixed charges the reorganization had brought about a distinct simplification of the financial structure, and had secured a permanent cancellation of the floating debt and a considerable contribution of new money.

#### ALTERNATIVE PLAN

A part, at least, of the refunding operations of this plan depends upon the willingness of the holders of the underlying bonds to exchange them for new bonds. If these holders refuse to co-operate, or if they exact too high an inducement, the plan would have to be consummated without their help. In that case the 3 underlying issues need not be disturbed. Such a plan would not bring about so great a simplification in financial structure, but there would be nearly as great a reduction in fixed charges. At all events the first mortgage bonds of the Sunboro and Eastern and all bonds and unfunded debt below these should be changed from a fixed to a con-

tingent charge security. In actual practice this would be accomplished through a foreclosure of the Sunboro and Eastern first mortgage 5's, which would extinguish the general mortgage bonds and all junior securities.

81. On June 30, 1902, the Jamestown, East Coast and Southern Railway had main line of road as follows:

Jamestown to Dobson.....	219.3 miles
Huron Branch: Norwalk Junction to Huron....	12.4
Warrenton Branch: Warrenton to Jefferson....	13.5
Total Length of Line.....	<u>245.2 miles</u>

History: The road was organized July 10, 1886, as a reorganization and consolidation of the old Jamestown and Southern and East Coast Railway. The Warrenton Branch was built in 1887, the Huron in 1889.

Rolling Stock: As of June 30, 1902. Locomotive engines, 61. Cars, passenger, 18. Combination, 6. Baggage and mail, 3. Freight (box 900, platform, 165; stock, 10; coal, 3,964; caboose, 35), total 5,074; service cars, 7—total cars, 5,108.

Central Division Bonds are secured by the main line from Jamestown to Dobson. The Eastern Division bonds are secured by a cut-off on the main line from Jamestown Center through to Rickers.

The first mortgage and extension improvement 5% mortgage bonds are a second mortgage on the Central and Eastern Division and the first mortgage on the Huron Branch.

The third mortgage consolidated bonds are a third mortgage on the Eastern Central Division, second mortgage on the Huron Branch, and a first mortgage on the Warrenton Branch. They are also secured by the deposit with the trustee of certain very valuable traffic agreements covering interchange of traffic at Jamestown and Dobson.

Down to 1899, the road made relatively few advances and improvements, the capitalization remaining essentially the same. In 1899 it embarked on a series of extensions, improvements and financial operations. These involved reduction of expensive grades and curves and the building of a network of small branch lines, leading into coal mines. Until 1899 the road had carried a large proportion of through freight, particularly coal delivered to it by connecting roads. Beginning with 1899 it attempted to develop certain large areas of coal lands, lying adjacent to its main lines.

The \$2,000,000 of consolidated mortgage bonds were issued very largely to pay for these improvements. Two years before, the road had acquired an option on a large semi-developed coal property located at

STATEMENT OF OPERATIONS, CAPITAL ACCOUNT, ETC., FOR SIX YEARS ENDING JUNE 30<sup>1</sup>  
JAMESTOWN, EAST COAST AND SOUTHERN RAILWAY

	1897	1898	1899	1900	1901	1902
Miles of Road Operated.....	186	186	186	216	233	271
Passenger Train Mileage.....	338,858	384,920	381,864	382,642	401,553	493,716
Freight Train Mileage.....	514,975	545,896	473,412	602,317	721,612	821,619
Passengers Carried.....	269,108	289,937	315,512	340,069	458,987	501,987
Passengers Carried One Mile.....	6,047,862	6,232,254	6,592,990	6,808,181	9,536,748	11,967,434
Tons Freight Moved.....	1,113,527	1,018,475	1,092,776	1,468,034	1,607,487	1,888,911
Tons Freight Moved One Mile.....	103,963,254	107,865,885	103,929,375	153,749,459	162,702,497	200,109,716
Earnings						
Passenger.....	\$120,756	\$137,666	\$146,564	\$154,177	\$178,474	\$ 196,718
Freight.....	509,798	628,591	648,661	815,191	962,706	1,219,113
Mail and Express.....	19,140	18,399	22,411	22,558	22,203	24,119
Miscellaneous.....	27,554	33,697	52,859	49,253	55,136	61,654
Total Traffic Earnings.....	\$677,248	\$818,353	\$870,495	\$1,041,179	\$1,218,519	\$ 1,501,604
Operating Expenses and Taxes.....	492,407	576,518	568,338	649,331	772,770	991,301
Net Earnings over Expenses and Taxes... Other Receipts.....	\$184,841	\$241,835	\$302,157	\$391,848	\$445,749	\$510,303
Available Revenue.....	\$184,841	\$241,835	\$302,157	\$398,088	\$452,535	\$519,419
Payments						
Interest on Bonds.....	92,874	143,045	150,000	187,500	390,542	570,000
Interest Discount and Exchange.....	753	2,277	65	.....	761	.....
Dividends on Preferred Stock.....	.....	(2) 70,268	(4) 144,866	(4) 144,000	(4) 167,000	.....
Balance (+ or -).....	+ 91,214	+ 26,245	+ 7,226	+ 66,588	- 105,768	- 50,581
Gross Earnings per Mile.....	3,641.12	4,399.74	4,680.08	4,820.27	5,321.04	5,540.97
Operating Expenses and Taxes per Mile...	2,647.35	3,099.56	3,055.57	3,006.16	3,245.61	3,654.25
Net Earnings per Mile.....	993.77	1,300.18	1,624.51	1,814.11	2,075.40	1,883.04
Expenses to Earnings.....	72.71%	70.45%	65.29%	62.37%	63.42%	66.00%
Average Rate per Passenger per Mile.....	1.99c.	2.20c.	2.12c.	2.27c.	1.87c.	1.64c.
Average Rate per Ton per Mile.....	0.49c.	0.59c.	0.62c.	0.53c.	0.59c.	.61c.

<sup>1</sup> See next page for notes.

## JAMESTOWN, EAST COAST AND SOUTHERN RAILWAY (Continued)

Capital Stock.....	\$3,513,400	\$3,600,000	\$3,600,000	\$7,100,000	\$10,500,000	\$10,500,000
Funded Debt.....	2,796,750	3,000,000	4,500,000	5,930,000	7,930,000	10,930,000
Equipment Contracts.....	130,270	55,658	12,342	.....	.....	.....
Accrued Interest on Bonds.....	34,950	37,500	37,500	75,000	104,792	129,300
Bills Payable and Interest on Same.....	71,893	21,729	.....	.....	.....	495,321
Net Current Liabilities.....	.....	35,134	25,385	.....	49,122	192,118 <sup>a</sup>
Income Account.....	56,076	83,221	90,447	157,035	151,267	121,943
Total Liabilities.....	\$6,604,239	\$6,833,242	\$8,265,674	\$13,262,035	\$18,735,181	\$22,368,682
Railway and Equipment.....	\$6,466,035	\$6,505,125	\$6,543,388	\$11,774,758	\$17,716,739	\$20,181,659
Stocks of Other Companies.....	67,953	150,000	165,000	835,000	835,000	1,117,914
Other Investments.....	.....	11,433	1,525,191	541,227	92,305	900,000
Cash and Accounts.....	49,093	121,479	.....	62,846	27,233	68,491
Supplies on Hand.....	21,158	45,205	32,095	48,204	63,904	100,618
Total Assets.....	\$6,604,239	\$6,833,242	\$8,265,674	\$13,262,035	\$18,735,181	\$22,368,682

<sup>a</sup> First mtg. (Central Div.) 5% \$1,000 gold bonds, due Oct. 1, 1926, int. April and October.  
 First mtg. (Eastern Div.) 5% \$1,000 gold bonds, due July 1, 1928, int. Jan. and July.  
 First mtg. extension and improvement 5% 40-year gold bonds, due 1930, int. Feb. and Aug.  
 Consolidated mortgage 6's due 1950.....  
 10-year coupon notes 5%.....  
<sup>a</sup> About  $\frac{1}{2}$  incurred within six months.

\$3,000,000  
 1,500,000  
 1,430,000  
 2,000,000  
 3,000,000

Spencer about 12 miles off from its main line. The purpose had been to finish the development of this property and to secure from it a large coal traffic. The \$3,000,000 10-year coupon notes had been issued and sold, and the proceeds devoted very largely to the purchase of this coal property. The stock of the coal mine had been pledged as collateral for the 10-year coupon notes. For financial details see tables on pages 431 and 432.

On the publication of the unfavorable statement of June 30, 1902, a committee of bankers, consisting of the trustees of the Central Division bonds, the agent of a large insurance company which owned \$250,000 of the Eastern Division bonds, and the vice-president of a bank to whom the company owed \$100,000 of the \$405,321 bills payable, met and petitioned the court for the appointment of a receiver. The president of the road and certain directors opposed the petition, but the prayer was granted by the court. A committee of the directors was immediately organized and proposed within 30 days a plan of reorganization.

Consider yourself one of these directors, what plan would you propose?

82. The Portland and Danbury Railroad had been established 40 years ago. It had never been thoroughly successful and during the last few years, owing partly to antiquated management and partly to the fact that the timber tributary to its lines had all been cut away, the railroad had fared ill. There follows a brief summary of its condition at the end of 1911. The company passed into the hands of receivers in the early part of July on a non-resident creditor's bill. At the time in question \$287,965.30 of the current liabilities had been contracted within six months of receivership; practically all for materials and supplies necessary for the continued operation of the road. About a quarter of the common stock was held by farmers and small tradesmen living along the line. About half of the stock was then held by banking interests who had exercised a nominal control over the railroad from 1903 to 1911. The remaining quarter of the common stock had been purchased from time to time by outside interests widely scattered. The bankers who held half the common stock were financially embarrassed and had pledged the stock as collateral for a loan of \$60,000 at a New York bank.

Prepare a plan of reorganization of the road.

## THE PORTLAND AND DANBURY RAILROAD COMPANY

### Main Line of Road

Portland to Danbury .....	203.5 miles
Jones River Division: Jones River Junction to Cleveland....	51.0 "

## EQUIPMENT OBLIGATIONS OF THE PORTLAND AND DANBURY RAILROAD, JUNE 30, 1911

SERIES OR OTHER DESIGNATION	DATE OF ISSUE	TERM	CASH PAID ON DELIVERY OF EQUIPMENT	DEFERRED PAYMENTS, PRINCIPAL		EQUIPMENT COVERED
				ORIGINAL AMOUNT	AMOUNT OUTSTANDING	
B-17—Central Car Trust Company	Jan. 1, 1909	60 Mo.	\$17,110	\$ 91,253.40	\$ 55,512.48	2 locomotives, 100 flat cars, 4 passenger cars, 1 combination car, 50 box cars.
25— " " "	Mar. 1, 1909	60 "	3,150	16,800.00	10,780.00	1 locomotive, 3 passenger cars.
26— " " "	Mar. 1, 1909	60 "	3,000	16,000.20	10,266.78	2 locomotives.
27— " " "	June 1, 1909	60 "	6,600	35,200.00	24,346.81	100 flat cars.
31— " " "	Nov. 1, 1909	60 "	16,600	88,533.60	68,613.54	5 locomotives, 1 combination and 100 box cars.
33— " " "	Jan. 1, 1910	60 "	13,560	72,319.80	58,458.50	2 locomotives, 100 flat cars, 3 passenger cars, 2 combination cars, 1 float.
38— " " "	Mar. 20, 1910	18 "	5,000	18,000.00	9,000.00	5 passenger and 1 combination cars.
31—American Car Trust Company.....	Nov. 20, 1909	16 "	2,000	8,000.00	1,612.50	50 box cars.
New York Equipment Company.....	Feb. 1, 1908	60 "	6,200	41,333.40	17,222.25	2 locomotives, 60 flat cars, 4 passenger cars, 50 box cars.
" " ".....	Mar. 1, 1909	60 "	5,000	26,666.40	16,888.72	4 locomotives, 50 log cars.
B-190—R. R. Equipment Company	May 15, 1910	60 "	8,320	44,373.00	39,196.15	2 locomotives.
Humphreys and Gayce.....	July 1, 1910	12 "	1,375	4,125.00	2,062.50	
			\$87,915	\$462,604.80	\$313,960.23	



Sherman's Hill Branch: Sherman's Hill to Winchester.....	11.0 miles
Other Branches: Buffalo Springs, 4; Hitchcock's Mill, 6; Bea- mon's, 3; Savidge's, 5.....	18.0 "
Total Length of all Lines Operated.....	283.5 miles
3rd rail, 4 m.; Sidings, 21 m.; Gauge, 4 ft. 8½ in. and 3 ft. Rail (steel), 35 and 56 lbs.	

Rolling stock. Locomotive engines, 30. Cars: passenger, 29; baggage, mail and express, 3; freight (box, 250; platform, 429; coal, 3), 682; caboose, 6; logging, 50. Total cars, 770. Of this equipment, 20 locomotives, 22 passenger, 2 baggage, etc., 235 box, 360 platform, 6 caboose, and 60 logging cars were acquired through a car trust.

Operations for year ending June 30, 1911. Train mileage: passenger, 302,312; freight, 267,152; other, 291,062. Total, 860,526 miles. Passengers carried, 178,845; carried one mile, 3,226,109; average mile rate, 2.83 cents. Tons freight moved, 368,768; moved one mile, 18,495,653; average ton-mile rate, 1.95 cents.

<i>Earnings</i>		<i>Expenses</i>	
Passenger.....	\$ 91,349.35	Transportation.....	\$254,776.05
Freight.....	360,201.48	Maintenance of	
Mail and Express...	24,098.23	Equipment.....	103,338.52
Miscellaneous.....	22,613.98	Maintenance of Way	
		and Buildings....	128,284.93
		General.....	50,910.91
<hr/>		<hr/>	
Total (\$1,757.54		Total (\$1,895.28	
per mile).....	\$498,263.04	per mile).....	\$537,310.41
Loss from Operation.	\$ 39,047.37		

Financial Statement, June 30, 1911. Capital stock (par \$100), \$5,754.-890; funded debt (1st mortgage gold 6% 30-year \$1,000 coupon bonds, due October 1, 1917, interest April and October), \$4,952,000; equipment trust obligations, \$313,960.23; current liabilities, \$627,172.40. Total liabilities, \$11,648,022.63. Detailed statement of equipment trust obligations, as of June 30, 1911, appears on page 434.

\*\*83. The Tifton Falls Power Company distributes electricity to power and lighting customers in Tifton, a city of 9,500 inhabitants. It also sells in 1919 electricity at 1.4 cents per k.w.h. (without demand or coal clauses) to six other electric distributing companies serving as many communities, all located within 18 miles of Tifton and all connected with the central power-house by 33,000 v. transmission lines. The company began to

deliver some current January 1, 1912. The following represent the earnings for the next 7 years (even 000):

	1912	1913	1914	1915	1916	1917	1918
Gross Sales of Tifton.....	\$12,000	\$32,000	\$54,000	\$63,000	\$ 76,000	\$83,000	\$94,000
Gross Sales to Other Distributing Companies.....	0	15,000	37,000	59,000	102,000	165,000	213,000
Net.....	3,000 (def.)	21,000	49,000	71,000	107,000	149,000	161,000

During all of 1918 and during the last 8 months of 1917 the power company had utilized every bit of its hydraulic energy, notwithstanding improvements in its wheels and generating machinery. In 1918 the company sold about 2,000,000 k.w.h. to its own customers at Tifton and about 15,000,000 k.w.h. to the six distributing companies. Of this 17,000,000 k.w.h. about 12,000,000 was generated by hydraulic energy and the remainder by three steam stations. Energy at the steam switchboards was costing the company about 1.5 cents at the end of 1918.

From May 3 to May 21, 1919, there was continuous rainfall over the storage areas of the Tifton Falls Power Company. At 6 o'clock on the evening of May 19 a storage dam 9 miles above the falls broke away. The water began to rise within an hour, and the power company's dam went out in the early morning. About 8 square miles of farm land was inundated before the flood finally subsided.

At the time of the catastrophe the capitalization of the Tifton Falls Power Company was as follows:

5% Bonds due 1942.....	\$1,000,000
Preferred Stock 7% cumulative (dividends had been regularly paid).....	600,000
Common Stock.....	3,000,000

The company passed into the hands of receivers May 25, 1919. On July 9, 1919, representatives of the six distributing companies, whose only available source of power had been the Tifton Falls Power Company, offered to sell the property of the six companies to interests previously owning 63% of the common stock for the actual capital cost of the properties—in the aggregate \$1,316,000. The owners of these six properties will consent to take 6% bonds—secured by a first mortgage on the transmission lines and distributing systems of these six companies—as payment

for 50% of the purchase price. The remainder of the purchase price must be paid in cash.

Consider fully the entire situation. Granting: (1) that the aggregate gross receipts per k.w.h. is the same in the six communities as in Tifton; (2) that \$317,000 must be spent, provided the dam is to be replaced exactly as before, or \$468,000 if the k.w.h. annual output is to be increased by 40%—the ultimate limit available from the average annual second feet of the Tifton River at the falls; (3) that the operating ratio of the total aggregate properties can be improved by 5% over that of the Tifton Power Company in 1918.

Prepare a general plan embodying the formation of a new company to operate the properties previously owned by the Tifton Falls Power Company and the six other distributing companies. Your plan should contain suggestions as to procedure after July 9, 1919, the detailed financial plan of the new company, and explicit statements of the sources of new money. You may assume that the plans are to be consummated during December, 1919.

84. In 1911, Thomas S. Sargent and Company, Engineers, organized the Northern Counties Light, Heat and Power Company. It represented in 1920, a holding company owning only the common stocks of 9 small electric light and gas companies operating in the towns and cities of northern Kansas. From 1912 to the summer of 1914, the holding company had paid dividends regularly on its preferred stock. The preferred stock dividend due August 15, 1914, was passed, the international turmoil being advanced as the excuse. Dividends were not resumed, although the reports sent to the stockholders at the end of each year were very reassuring.

The company defaulted the March 1, 1921, interest on its collateral trust, prior lien 5% bonds. No reasons were alleged, other than the general financial depression. Auditors appointed by a committee representing investors mildly hostile to the interests of the Sargent firm made an exhaustive report. The main features of this report brought out the simple fact that the extensions and improvements undertaken by the operating companies failed to prove as profitable as the engineers had anticipated. Operating expenses increased, relatively and absolutely, faster than gross earnings. The costs of the extensions of the operating companies were met at first by the sale of the underlying securities of the operating companies themselves. Later the extensions were paid for by short-time borrowings—notes and bank loans—of the operating companies. During 1919 and 1920, even this expedient failed, and the holding company made large

THE FOLLOWING REPRESENTS THE ABBREVIATED FINANCIAL AND OPERATING STATEMENTS AS OF MARCH 1, 1921  
SUBSIDIARIES OF NORTHERN COUNTIES LIGHT, HEAT AND POWER COMPANY

	BRANSTON	PEABODY	CURRENT RIVER	CONWAY	CARTERS- BORO	HAMILTON	ALBANY	STOUGHTON	CARYTOWN
Bonds (All in hands of public).....	\$500,000 (5's)	\$1,768,000 (5's)	\$218,000 (6's)	\$306,000 (5's)	\$1,000,000 (5's)	\$ 670,000 (4's)	\$100,000 (6's)	\$800,000 (5's)	\$ 92,000 (6's)
Notes (Investors) .....	.....	250,000 (6's)	.....	.....	1,000,000 (7's)	.....	.....	100,000	.....
Notes (Owned by holding company).....	38,000	672,000	.....	195,000	786,000	218,000	21,000	382,000	25,000
Notes (in banks).....	15,000	150,000	27,000	10,000	90,000	28,000	.....	50,000	1,000
Notes (Merchandise) .....	8,700	29,000	3,000	17,000	4,000	.....	.....	25,000	.....
Accounts Payable .....	4,318	61,716	2,700	6,313	9,878	6,741	492	16,704	918
Preferred Stock (All in hands of public) .....	.....	500,000 (C. 6%)	.....	.....	.....	200,000	100,000	600,000	.....
Common stock owned by holding company and pledged to secure its collateral prior lien bonds.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	500,000	1,000,000	250,000	500,000	3,000,000	1,000,000	100,000	500,000	100,000

# INCOME AND EXPENDITURE ACCOUNT YEAR ENDING MARCH 31, 1921

	BRANSTON	PEABODY	CURRENT RIVER	CONWAY	CARTERSBORO
Gross Earnings (Customers' receipts)	\$103,716	\$567,313	\$42,716	\$49,133	\$611,442
Operating Expenses (including taxes)	69,816	310,118	41,102	37,967	318,961
Dividends on Preferred Stock	.....	30,000	.....	.....	.....
Amount of Dividends paid to holding company					
Cash	.....	30,000	.....	.....	120,000
Scrip	.....	30,000	.....	.....	30,000

	HAMILTON	ALBANY	STOUGHTON	CARYTOWN
Gross Earnings (Customers' receipts)	\$209,007	\$28,000	\$291,662	\$17,671
Operating expenses	117,317	21,000	287,117	21,718
Dividends on Preferred Stock	14,000 (scrip)	.....	.....	.....
Amount of Dividends				
Cash	.....	.....	.....	.....
Scrip	20,000	.....	.....	.....

advances to 6 of the operating companies. The money for these advances were secured by three methods: (1) ordinary, unsecured 3 to 6 months' loans from its banks, regularly renewed at each maturity; (2) the sale in the spring of 1920 of \$1,000,000, 2-year unsecured 8% notes to investment bankers, and (3) the issue—followed by the pledge—of \$1,374,000 collateral trust prior lien bonds. The collateral trust prior lien bonds were used to secure a loan of \$1,000,000 from the North Avenue National Bank of Chicago. Subsequently the right of the corporation to issue this particular block of bonds became subject to extended litigation.

The following represents the balance sheet of the Northern Counties Light, Heat and Power Company itself as of March 1, 1921 (even 000):

<i>Assets</i>	<i>Liabilities</i>
Securities of Operating Companies..... \$ 7,941,000 (Representing the entire common stock issues of nine electric light and power companies) Collateral Trust, Prior Lien Bonds Pledged as Collateral..... 1,574,000 Demand Notes of Operating Companies.... 2,337,000 Scrip Dividends of Operating Companies 1914 to 1920..... 160,000 Bond and Note Discount..... 110,000 Miscellaneous Assets.. 27,000 Cash..... 4,000 <hr/> <hr/> \$12,153,000	Collateral Trust Prior Lien 5% Bonds Due March, 1941..... \$ 4,574,000 Notes Payable (less than one year)..... 786,000 Two-Year 8% Notes Due April 1, 1922... 1,000,000 North Auburn Nat. Bank Loan..... 1,000,000 Preferred Stock..... 1,500,000 Common Stock..... 2,000,000 Surplus..... 1,293,000  <hr/> <hr/> \$12,153,000

The income statement for the year ending March 1, 1921, was as follows:

Receipts from Dividends of Subsidiary Companies..... \$230,000 Interest on Collateral Prior Lien 5's September 1, 1920.. \$150,000 Interest on 2-Year Notes Due April 1, 1922—October, 1920..... 40,000 Bank Interest..... 49,817 Salaries, General Expenses..... 38,791	<hr/> \$278,608
Deficit.....	\$ 48,608

The collateral trust, prior lien bonds had been sold at various times from 1911 to 1915, to investors. The initial offering was at 91½. The preferred stock had been sold originally in blocks of 3 shares of preferred and 1 share of common for \$250. Of the \$2,000,000 of common stock, approximately \$1,000,000 was owned by Thomas S. Sargent and Company, but pledged with a New York bank for a loan of \$80,000. Five hundred

thousand dollars (\$500,000) of the common was owned outright by the syndicate which originally sold the blocks of common and preferred stocks. This, except for a cash commission of 2% on the gross sales to customers, represented their entire banking profit.

Prepare an exhaustive report covering the reorganization of the company.

### Chapter XXVII—Reorganization of Industrials

85. Andrew Stevens, a shoesalesman, and Peter Dobell, an expert fitting room superintendent, formed a partnership in Haverhill, Massachusetts, in 1911, to manufacture ladies' fancy slippers. They were backed in the beginning by Edward Lawton, a capitalist, who had married Stevens' cousin. He loaned \$5,000 to Stevens, personally; and loaned \$20,000 to the partnership of Stevens and Dobell. Dobell contributed \$5,000 of his own money. At the end of 1911, the business not having been as successful as Stevens had painted, Lawton sought to withdraw his capital. This created ill feeling between Lawton and Stevens, resulting finally in an agreement between the two under which Lawton agreed to cancel his personal loan of \$5,000 to Stevens and his loan to the partnership of \$20,000 on payment of \$22,000 in money. Stevens agreed. He secured the co-operation of Thomas Ingalls, a retired shoe manufacturer of Lynn, who made the following proposition: The Ingalls Slipper Company was to be organized with \$100,000 capital stock. Ingalls would settle with Stevens at the figure mentioned, and pay into the corporation \$25,000 more. Of the \$100,000, \$10,000 par value was to go to Dobell, \$10,000 to Stevens, and the remainder to Ingalls. The latter was to become president and treasurer of the company, Stevens, vice-president and sales manager, and Dobell, factory superintendent. This was done.

The business became, almost immediately, very successful. The company specialized in the manufacture of a simple, cheap slipper, wholesaling for about 40 cents a pair. The plan was to make a small profit on a large turnover. By the end of 1913 the company, by the reinvestment of its profits, had increased its net worth to \$165,000. Meanwhile the company had purchased a factory at a cost of \$200,000, the lower floors of which it leased to tenants and carried on its business in the loft, with a shipping room in the basement. Ten thousand dollars only had been paid down, a savings bank had taken a first mortgage of \$100,000 on the building and the remaining payment had been met by giving the company's 1-year note for \$90,000, secured by a second lien mortgage on the building. This note ran one year from August 1, 1913.

During the spring of 1914 the demand for slippers from jobbers was excellent and the business was as profitable as in the previous years. The company bought only enough leather and materials for its immediate needs, so that a minimum of capital was tied up in its inventories. Its greatest weakness was in the collection of its accounts receivable. Owing to the large volume of business undertaken by the company and relatively long credits, there was always a shortage of liquid capital. The company had received liberal accommodation from the Haverhill banks and had opened a \$100,000 line of credit with the Importers' National Bank of Boston. This required an average deposit of \$20,000. It had been the intention of Ingalls, the treasurer, gradually to transfer his entire borrowings to the Boston bank. In April, 1914, owing to an unfortunate sale to a Porto Rican distributor in the autumn of 1913, the firm found itself at a great loss for want of ready capital. Ingalls did not dare infringe upon his customary deposit of \$20,000 at the Importers' National in view of his proposed policy of increasing his loans there. He could not, on the basis of his present borrowings in the Haverhill banks, reduce his deposits there. As a last resort he began to "sell" his accounts receivable. This process consisted in borrowing up to 80% of the par value of certain of his accounts. For this accommodation the Manufacturers' Finance Corporation would charge a fee or fees which, in the aggregate amounted to an interest rate of nearly 14% per annum on the actual money borrowed. Meanwhile it tied up the accounts. In his reports to the Importers' National Bank and to the local banks the fact that specific accounts receivable were pledged to the Manufacturers' Finance Corporation was entirely omitted, although the loans themselves were included under bills payable.

The indebtedness on the accounts receivable tended to increase during May and June, due largely to the increasing volume of business. Business was unusually brisk during July, but collections were slow. Ingalls, a narrow-minded man who knew little outside of the shoe business, was oblivious to the foreign situation. The seriousness of this burst suddenly into his consciousness on the evening of July 25. Conditions were conspicuously unfavorable for him. He had told the Merrimac National Bank the day before that he intended to meet a note of \$25,000 due August 1, expecting to transfer this obligation to the Importers'. On the strength of this expectation he had drawn down his account at the Merrimac to less than \$1,000. To make matters worse, he had bought a lot of cut soles, costing \$9,387, at a special price, provided he should pay cash for them. The soles were to be delivered August 2.

Now fully conscious of the impending crisis in world finance, he called



on the morning of July 27, on James M. Costigan, the president of the Importers'. He went over his whole situation with him. The interview was cordial and friendly. Costigan promised to "take care of him"; he promised even to increase his aggregate loans to \$150,000, were it necessary, provided the current condition of his business warranted the credit. Nothing was said about the relations with the Manufacturers' Finance Corporation. Ingalls felt reassured.

Costigan immediately asked a special Dun report on the Ingalls Company. It reached him August 1, and disclosed the account with the Manufacturers' Finance Corporation. He immediately telephoned for Ingalls to come to Boston for a conference. The latter inferred that Costigan was alarmed over the sudden burst of war and wished to ascertain how the Ingalls' affairs stood. Instead, he was asked, in very direct terms, to explain his relations with the Manufacturers' Finance Corporation. Ingalls hesitated but finally admitted that he had specifically pledged certain of his amounts. Costigan then told him to close his account with the bank within 10 days. Three days later, a non-resident creditor, a friend of Ingalls, petitioned for the appointment of a receiver. Auditors reported as follows:

<i>Assets</i>		<i>Liabilities</i>	
Building, 20 Merrimac St.	\$200,000	Capital Stock . . . . .	\$100,000
Machinery Owned . . . . .	11,000	Mortgage on Building . . .	100,000
Leather and Findings . . .	97,684	Second Mortgage . . . . .	90,000
Merchandise Finished and in Process . . . . .	27,719	Manufacturers' Finance Corporation . . . . .	38,926
Accounts Receivable . . . .	216,817	Importers' National . . . .	98,000
Cash . . . . .	26,741	Haverhill Banks . . . . .	17,000
		Merchandise Debts . . . .	117,610
		Accrued Interest on Mort- gage and Note . . . . .	2,794
		Surplus . . . . .	15,631
	<u>\$579,961</u>		<u>\$579,961</u>

Auditors reported that the building was probably worth the first and second mortgages, but would probably sell for no more. It could not be sold then for any price. The machinery had a second-hand value of \$4,300 but was ample and sufficiently modern and efficient to use if the business was continued. The leather and findings had a current value of about \$42,000. They were necessary were the business continued. At the time,

August 15, 1914, there was little demand for slippers or anything else, but the finished goods could probably be sold directly and through jobbers for the cost. The accounts receivable represented the weak point of the business. At least \$32,000 listed were valueless. An account of \$61,000 with an export jobber, on account of a jobber in Porto Rico was probably of little value. It might realize 10% in the course of another year. \$84,000 of the accounts were certainly good. The remainder represented small sales directly to shoe stores, mostly in the South and Southwest. Their value was uncertain. Little could be realized on them immediately on account of the war.

The liability of \$38,926 to the Manufacturers' Finance Corporation was specifically secured by \$56,811 accounts. Of this amount \$41,016 were part of the \$84,000 listed as certainly good.

The receiver was asked by the court to continue the business until January 1, 1915. A reorganization plan was immediately proposed by Ingalls, and accepted by the creditors.

What was the plan?

**\*\*86.** The Achilles Tire Company was organized in 1914 by James Anderson, former sales manager, for the eastern district of the Goodnow Tire and Rubber Company, who contributed \$50,000 in cash. He had associated with him Heinrich Meisel, an Austrian, graduate of Bonn University in Chemistry, who had devoted himself to rubber. Meisel contributed \$10,000. Also, Edward Burr Reznor, a native of Butler County, Pennsylvania, who had moved up to Akron in the early days of the rubber industry and had made a fortune from his holdings in the old Goodnow Rubber Company when this was recapitalized in 1912 by Wall Street interests, contributed \$435,000 in cash.

The Achilles Tire Company was organized with \$1,000,000, 7% preferred stock and \$1,200,000 common stock. Anderson took \$50,000 preferred and \$250,000 common. Meisel took \$10,000 preferred and \$100,000 common. Reznor took \$435,000 preferred and \$400,000 common. The remainder of the issues were placed in the treasury to be sold later as the new company should require more capital. Before the organization Anderson signed a contract to act as president and general manager of the company with full charge of the purchase of materials and the sales of the product. He was to receive \$12,000 a year for a period of 5 years. Meisel agreed to act as vice-president. He had complete charge over the factory, including every detail of the actual manufacture of the tires. Reznor was to act as treasurer with only nominal duties. He was to receive no salary.

The company was a success from the very beginning. Meisel knew the manufacturing part of the business thoroughly. He loved detail, made a most painstaking study of every batch of tires that came through, invented a new testing machine to discover weak points in the fabric and an altogether new device to prevent buckling while the tire was being wrapped. Achilles tires soon became known all through the East for their uniformity and endurance.

Meanwhile, the business developed into a great financial success. In 1916 the company sold the remainder of its preferred stock to the public at par. Common stock to the amount of 2,500 shares was sold to Akron brokers in 1917 for \$96 a share. Banking connections were opened with the Warrentry Trust Company, a large institution in New York which insured a reserve credit of \$500,000. Schultz, Eimer and Company, note-brokers, opened an account with them in 1918, and by the end of the year had sold over \$600,000 of their paper.

The gross business for 1919 was twice that of 1918. Anderson arranged in the spring of 1919 to finance the Triton mill of Summerville, S. C., agreeing to take its entire outfit of fabric. The Achilles Tire Company acquired its stock, paying \$250,000 cash and \$250,000 in the 3-year unsecured notes of the Achilles Tire Company. In April, 1920, Anderson was told by a New York broker that the cotton market had passed beyond control and prices for long staple cotton were likely to double by October. Spot "contract" cotton was then quoted at 40 cents a pound. Immediately he bought 1,000,000 pounds of contract cotton, options distributed between July, October, and December. The price averaged 37 cents. He also contracted for 500,000 pounds  $1\frac{3}{16}$  inch staple cotton of an especially fine quality with a New Orleans factor for 76 cents a pound. In May he entered into a contract with M. Antigeeoras for 100,000 pounds Egyptian cotton at \$1.05 a pound delivered at the fumigating station in New York. Deliveries to be taken at the sellers' option between August 1 and October 1. He purchased 1,000 tons of plantation rubber held in a New York warehouse and contracted for 100 tons a month with an exporting house, deliveries to extend from June 1 to January 1.

While Anderson was seeking to protect himself against a "runaway" market for raw cotton and crude rubber, he was taxing his manufacturing capacity to the utmost. The orders had been running far ahead even of 1919, and the unfilled orders from agents and dealers were increasing.

Meisel had a nervous collapse June 8, as a result of overwork, the direct result of attempting to apply detailed, painstaking efforts to large-scale production without having built up a capable organization. Almost im-

mediately the quality of the tires fell. The returns of blemished tires from dealers were twice as great during June as ever before. Three car loads of tires shipped July 3, to a large New York wholesale accessory house were returned, on the claim that the goods were not equal to the company's best product, on the high quality of which the order had been placed. In accordance with the firm's custom the returns were accepted without question. Meanwhile the cancellations of orders from dealers began to come in in an alarming manner. Anderson immediately reduced the rate of output, so that for the first 2 weeks of July the shipments of tires actually accepted by dealers and agents were about equal to the output of the factory. Meisel's chief assistant, who had assumed charge of the manufacturing was doing better and the proportion of seconds declined, as compared with conditions during June. July 15, Anderson covered on his "spot" undelivered future contracts of "contract" cotton, with a total loss of \$61,000.

On July 29, Meisel evaded his attendant and leaped from a third story window of a sanatorium. He never regained consciousness and died the following morning. Reznor, meanwhile, had been carrying automobile companies' stocks with Lynch and Company in New York on margin. He lost heavily in the decline in the Maxwell shares and was then carrying 10,000 shares of General Motors common, purchased during the autumn of 1919 between \$38 and \$41 a share; and 5,000 B. F. Goodrich shares, purchased the year before at prices ranging from \$74 to \$92 a share. In addition he was carrying 15,000 shares of other stocks, all industrials and all showing losses from the purchase prices. August 9, Lynch telephoned him for more margin. He pledged everything he had, even his Liberty bonds, except the stock in the Achilles Tire Company. On Sept. 15 Lynch wired for more margin. General Motors was \$20; Goodrich under \$60; and nearly all the remainder of the securities in his account had fallen to new low levels. Reznor secured a loan of \$300,000 from the Warrentry Trust Company of New York, pledging his entire holdings in the Achilles Tire Company as collateral. This entire amount was handed to Lynch.

The entire management of the business now fell on Anderson, as Reznor, 66 years of age, was incapable of making any decisions in the emergency.

Anderson closed the Triton mill on September 13. All the long staple cotton had been delivered, but none of the Egyptian cotton bought from Antigoeoras. About half of the long staple cotton had been woven into fabric at the mill, and the remainder was in the mill's store house. He accepted his contracts on crude rubber, up to September 1, and obtained

an option to cancel contracts for the delivery of the September to January crude rubber, provided he made a cash payment, on or before October 1, to the exporting house of \$65,000. He reduced the tire factory to half-time on September 3, and ceased to manufacture on September 20.

Some loans at the local Akron banks were not renewed and Anderson gradually increased his loans at the Warrentry Trust Company until they reached \$600,000, a hundred thousand dollars more than the credit originally arranged for. Schultz, Eimer and Company worked loyally for the company and had over \$1,000,000 of notes placed among their customers.

When the Warrentry Trust Company heard that the factory was closed they wired Anderson and Reznor to come to New York and bring a full statement of the condition of the business. Reznor refused to go and Anderson went alone. He explained that he had closed the factory so that he might have an opportunity to "work off" his accumulated stock of goods. He stated that the only important immediate matter that would have to be attended to was the Antigeeoras contract which, at the current market for Egyptian cotton, might show a loss of about \$40,000. He said he had not reduced the prices of his tires below the cost of production and if the banks would extend him not over \$100,000 credit more, at the most, he could liquidate his present stock of tires and begin to manufacture again the raw materials he then held. Even if the wholesale prices of tires were reduced materially he thought that these raw materials could be best realized upon in the form of tires. He presented the following statement:

<i>Assets</i>		<i>Liabilities</i>	
Tire Plant, Actual Cost		Capital Stock	
Less Depreciation....	\$1,115,786	Preferred.....	\$1,000,000
Triton Mill, Cost.....	500,000	Common Issued(Treas-	
Raw Materials De-		ury \$200,000).....	1,000,000
livered and Paid for,		Schultz, Eimer and Co.	
or in Transit and Paid		(Account).....	1,090,000
for, Chiefly Rubber		Triton Mill Notes.....	250,000
and Long Staple Cot-		Warrentry Trust Com-	
ton (Cost).....	592,871	pany.....	600,000
Fabric, Cost of Cotton		Akron Banks.....	117,000
Plus Manufacturing		Merchandise Creditors..	184,716
Cost.....	296,021	Liability Under Cancel-	
Tires, Akron Warehouse		lation of Crude Rub-	
and New York (Cost).	307,816	ber Contract.....	65,000

Accounts Receivable....	\$ 318,211	Liability Under the Antigueoras Contract...	\$105,000
Notes of the Triton Mill not Represented by Cotton or Fabric.....	261,000		
Cash.....	117,942		
Cotton to be Received Under Antigieoras Contract.....	105,000		
Good-Will Account.....	750,000		
Stock Discount Account	10,000		
Deficit.....	37,069		
	<u>\$4,411,716</u>		<u>\$4,411,716</u>

Anderson reported that the raw materials, inventoried at a cost of \$592,871, had a current market value, based on spot cotton and crude plantation rubber, New York delivery, of \$218,700. Fabric mills were then quoting fabric prices, immediate delivery, that indicated a value of \$119,300 for the item of \$296,021. There had not been much of a decline in the wholesale prices of tires but the "demand" at any price was slight. The accounts were probably 90% good. The Triton mill was one of the best fabric mills for its size in the south. It had actually cost, with the improved machinery, less than two years old, about \$650,000. It owned a valuable water power. It had no notes or other liabilities outstanding, other than its notes to the parent company.

A few hours after Anderson had submitted this report to the Warrentry Trust Company, a conference was held attended by Anderson, Aaron Eimer, and a vice-president of the trust company. Anderson stated his confidence in his ability to work the situation out, and offered to surrender his stock to a committee of bankers to protect the company's creditors. This plan was acceptable to the vice-president of the Warrentry Trust Company, who offered to provide a further credit of \$50,000, provided Schultz, Eimer and Company would guarantee an equivalent credit if \$100,000 was required before Anderson could liquidate on his inventories. Eimer flatly refused, claiming Reznor had deceived him in stating the company's liabilities as he had said nothing concerning the future contracts in rubber and cotton. He demanded an immediate receivership and the complete elimination of Anderson and Reznor. Reluctantly the Warrentry Trust Company consented, and 3 days later a local Akron lawyer was appointed receiver under a non-resident creditor's bill.

Why was the Warrentry Trust Company opposed to a receivership and Schultz, Eimer and Company in favor of it?

Granting Anderson's statements of his situation were correct, prepare a balance sheet such as auditors for the receiver might present to a creditors' committee.

Prepare a plan of reorganization for the Achilles Tire Company. (The experience of this tire company should be compared with that of the Mayer Manufacturing Company. See problem 54, page 391.)





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